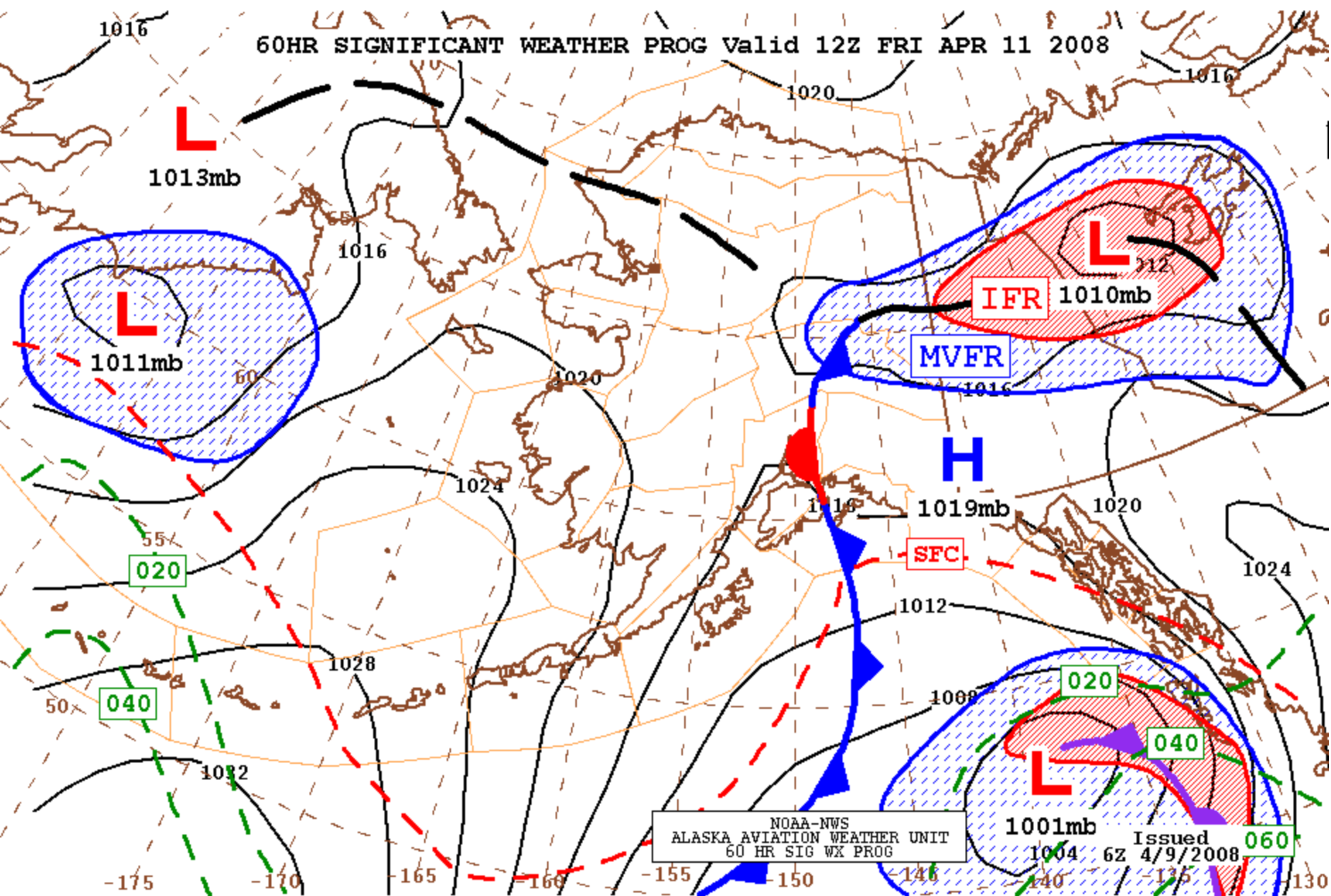


60HR SIGNIFICANT WEATHER PROG Valid 12Z FRI APR 11 2008



080411/1200V060 SFC SM5EMSL

# Aviation Digital Data Service (ADDS)

Output produced by TAFs form (1605 UTC 09 April 2008)  
found at <http://adds.aviationweather.gov/tafs/index.php>

Forecast for: PAFA (FAIRBANKS, AK, US)

Text: PAFA 091125Z 091212 VRB04KT P6SM FEW060 SCT180

Forecast period: 1200 to 2200 UTC 09 April 2008

Forecast type: FROM: standard forecast or significant change

Winds: variable direction winds at 5 MPH (4 knots; 2.1 m/s)

Visibility: 6 or more miles (10+ km)

Clouds: few clouds at 6000 feet AGL  
scattered clouds at 18000 feet AGL

Weather: no significant weather forecast for this period

Text: FM2200 VRB03KT P6SM SCT070 BKN100

Forecast period: 2200 UTC 09 April 2008 to 0500 UTC 10 April 2008

Forecast type: FROM: standard forecast or significant change

Winds: variable direction winds at 3 MPH (3 knots; 1.6 m/s)

Visibility: 6 or more miles (10+ km)

Ceiling: 10000 feet AGL

Clouds: scattered clouds at 7000 feet AGL  
broken clouds at 10000 feet AGL

Weather: no significant weather forecast for this period

Text: FM0500 VRB03KT P6SM SCT040 OVC060

Forecast period: 0500 to 1200 UTC 10 April 2008

Forecast type: FROM: standard forecast or significant change

Winds: variable direction winds at 3 MPH (3 knots; 1.6 m/s)

Visibility: 6 or more miles (10+ km)

Ceiling: 6000 feet AGL

Clouds: scattered clouds at 4000 feet AGL  
overcast cloud deck at 6000 feet AGL

Weather: no significant weather forecast for this period

## **NWS Forecast for: MIDDLE TANANA VALLEY-INCLUDING...FAIRBANKS**

**301 AM ADT WED APR 9 2008**

**.TODAY...**PARTLY CLOUDY. ISOLATED SNOW SHOWERS IN THE AFTERNOON. HIGHS 30 TO 35. LIGHT WINDS.

**.TONIGHT...**MOSTLY CLOUDY. SCATTERED SNOW SHOWERS IN THE EVENING, THEN A CHANCE OF SNOW AFTER MIDNIGHT. LOWS 10 TO 20. NORTHWEST WINDS AROUND 10 MPH.

**.THURSDAY...**MOSTLY CLOUDY WITH A CHANCE OF SNOW. HIGHS AROUND 30. WEST WINDS AROUND 10 MPH. THURSDAY NIGHT...MOSTLY CLOUDY WITH A CHANCE OF SNOW. LOWS AROUND 15.

**.FRIDAY...**MOSTLY CLOUDY WITH A CHANCE OF SNOW. HIGHS 30 TO 35.

LIGHT WINDS. FRIDAY NIGHT...CLOUDY WITH A CHANCE OF SNOW. LOWS NEAR 15.

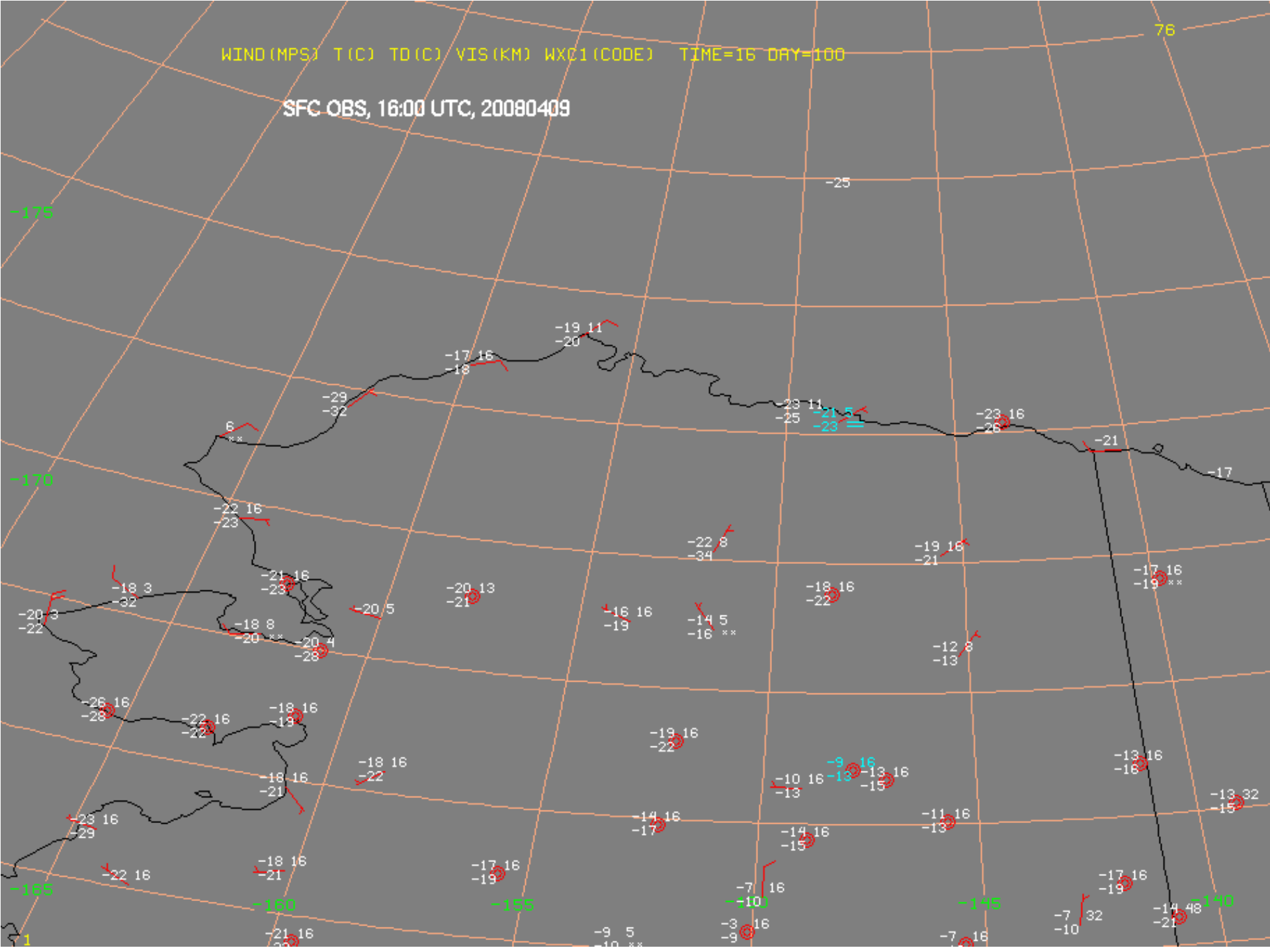
**.SATURDAY...**MOSTLY CLOUDY WITH A CHANCE OF SNOW. HIGHS NEAR 35. SATURDAY NIGHT...MOSTLY CLOUDY WITH A CHANCE OF SNOW. LOWS NEAR 15.

**.SUNDAY...**MOSTLY CLOUDY. HIGHS NEAR 40. SUNDAY NIGHT...MOSTLY CLOUDY. LOWS NEAR 20.

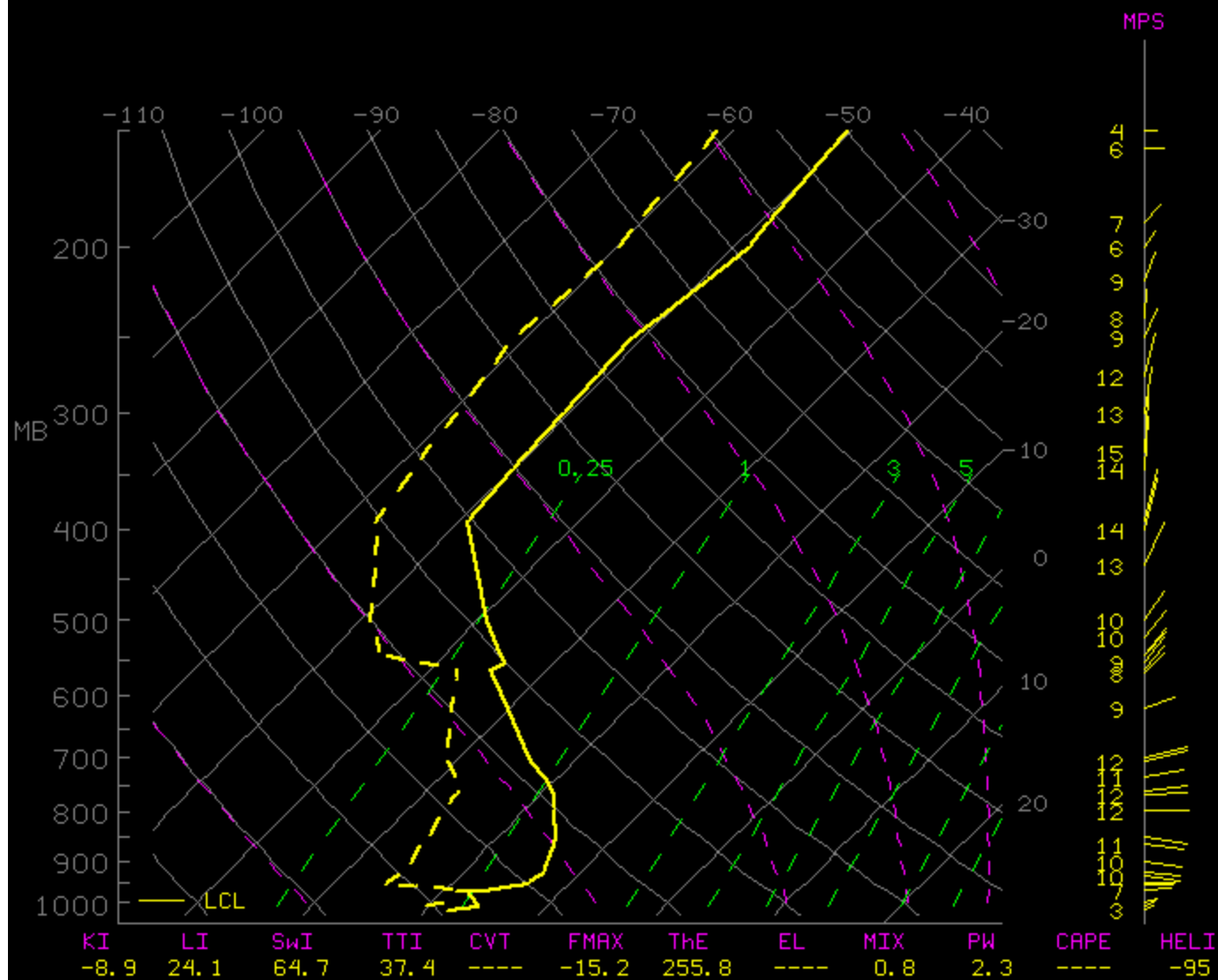
**.MONDAY...**MOSTLY CLOUDY. HIGHS NEAR 40.

WIND(MPS) T(C) TD(C) VIS(KM) WXC1(CODE) TIME=16 DAY=100

SFC OBS, 16:00 UTC, 20080409

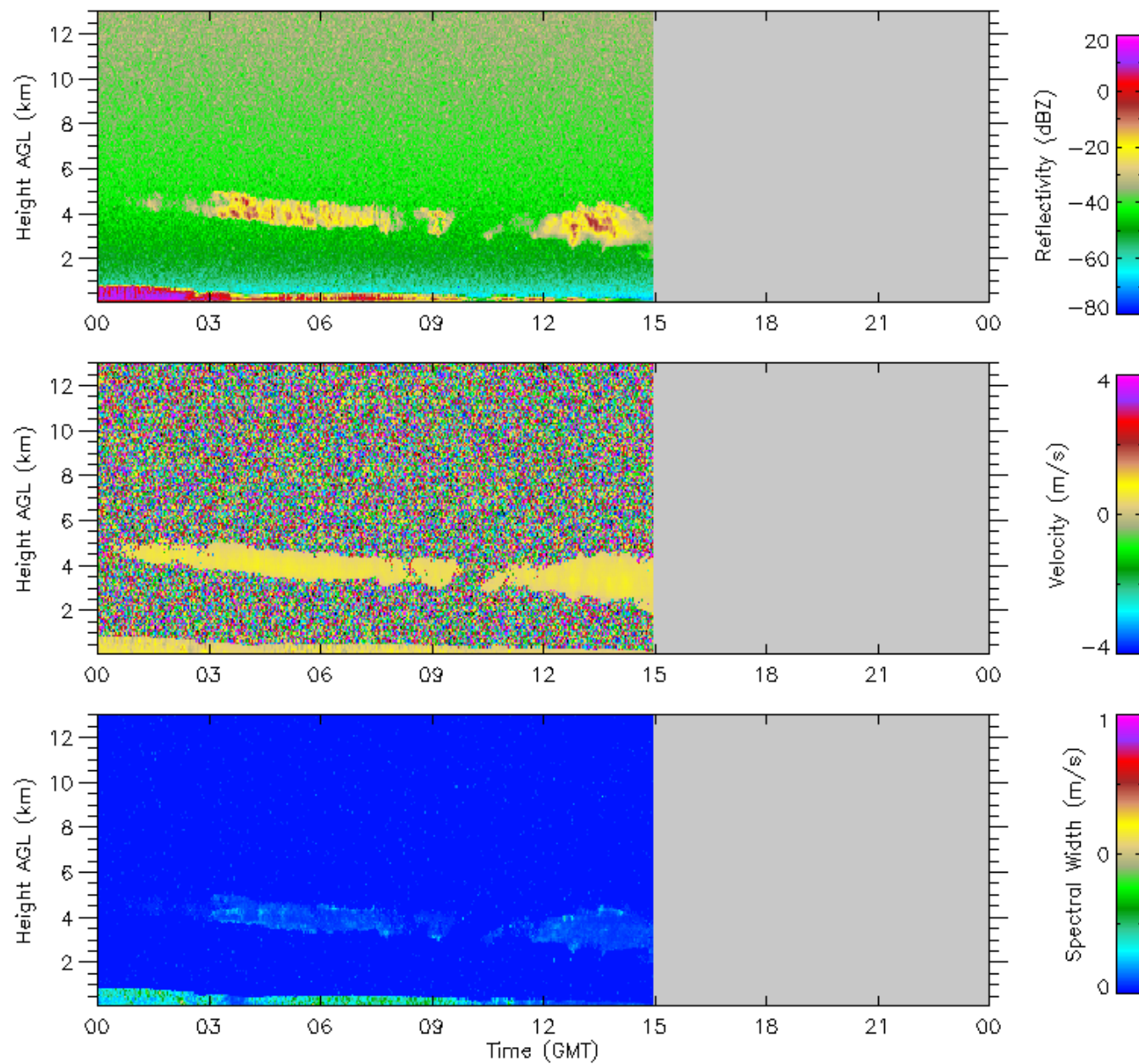


AK US

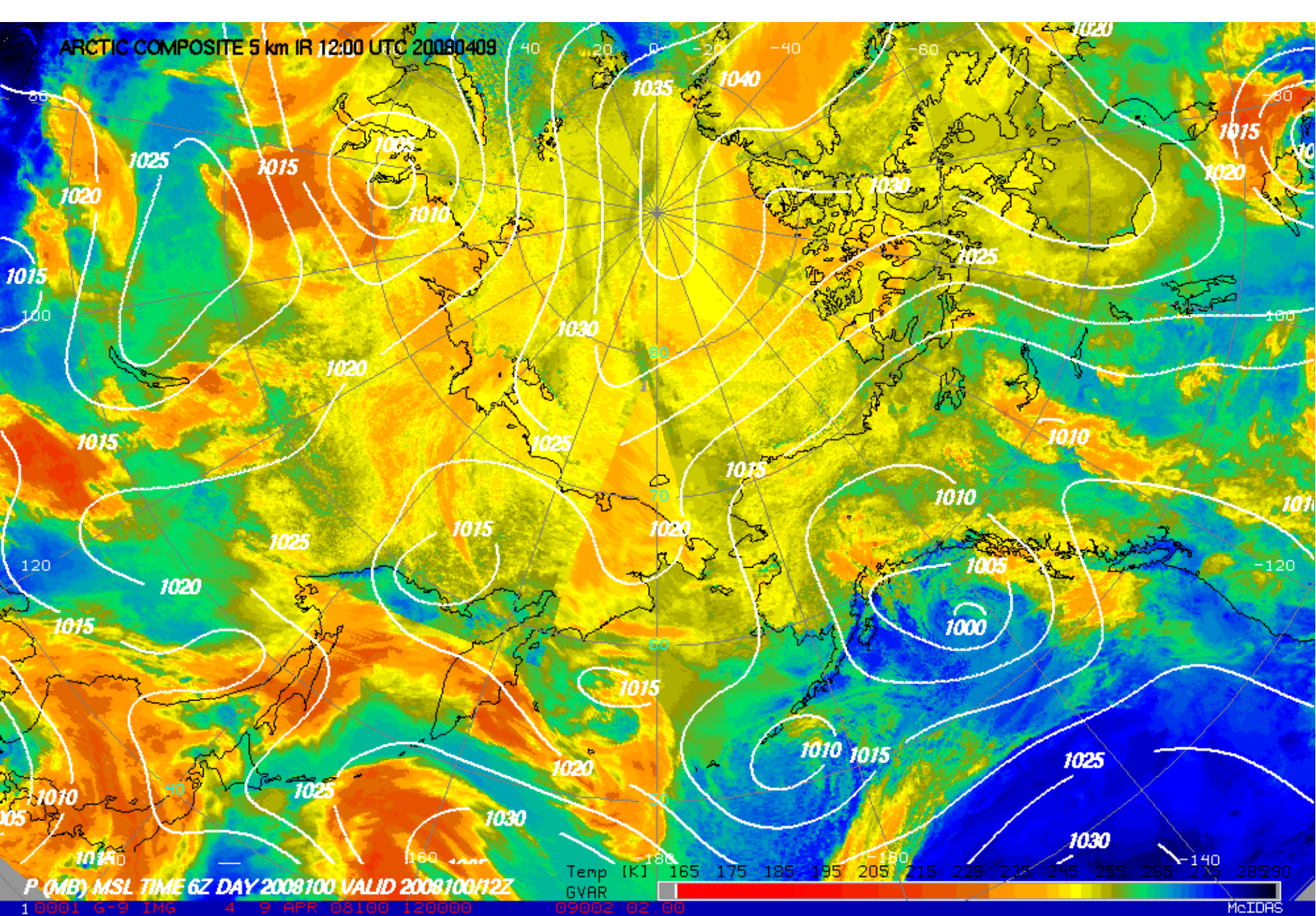


20080409

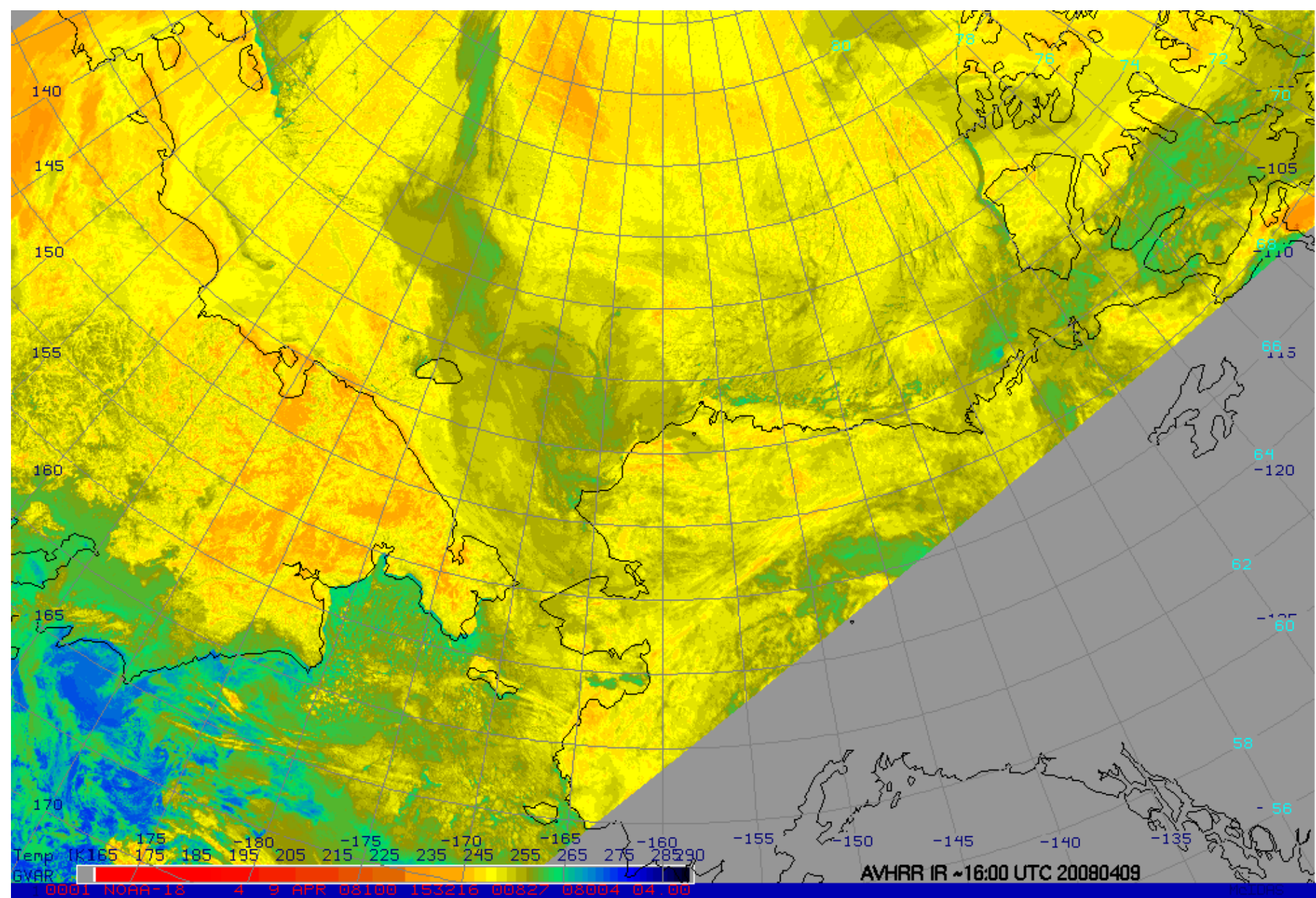
nsammcrmomC1.b1, General, Mode 3



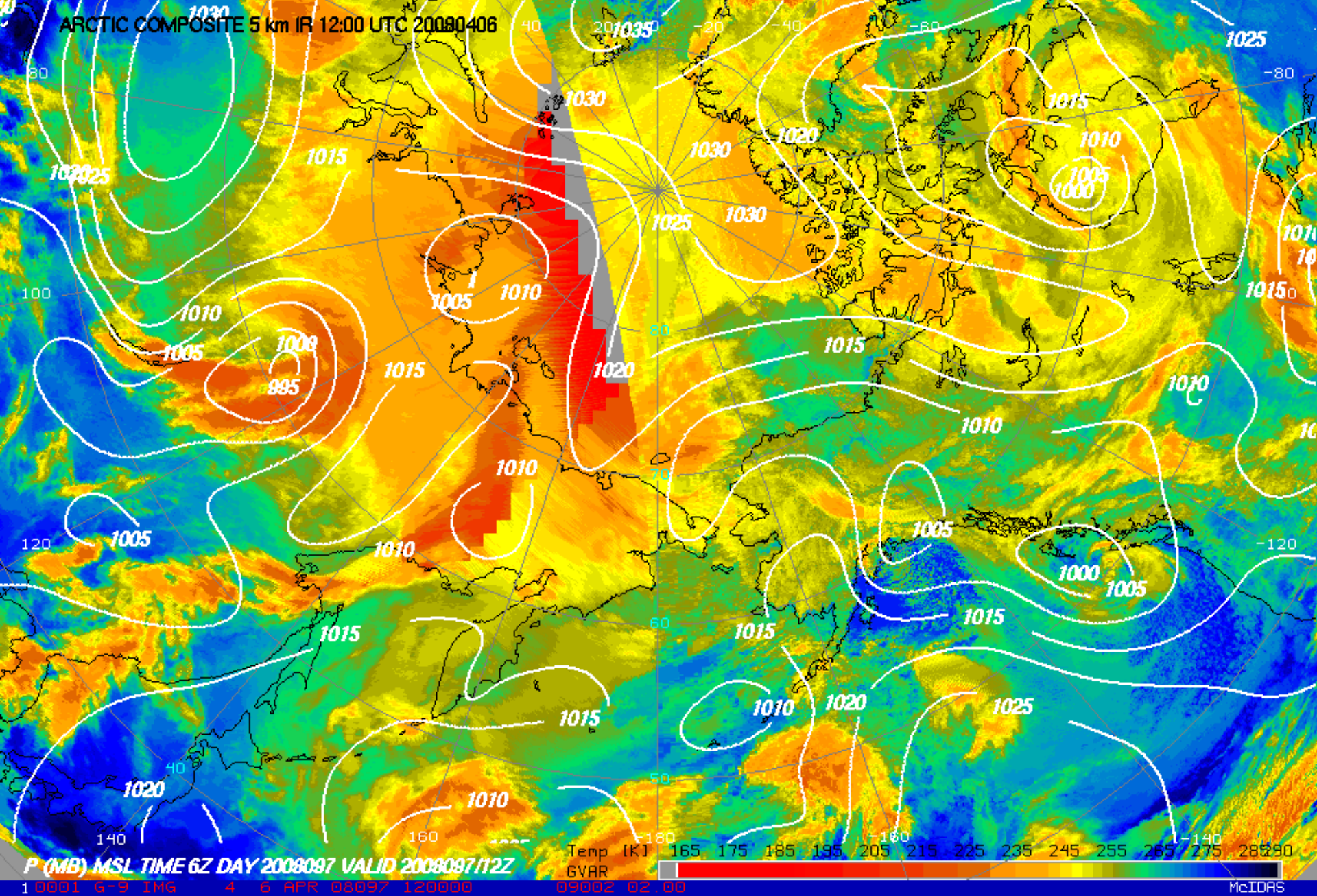












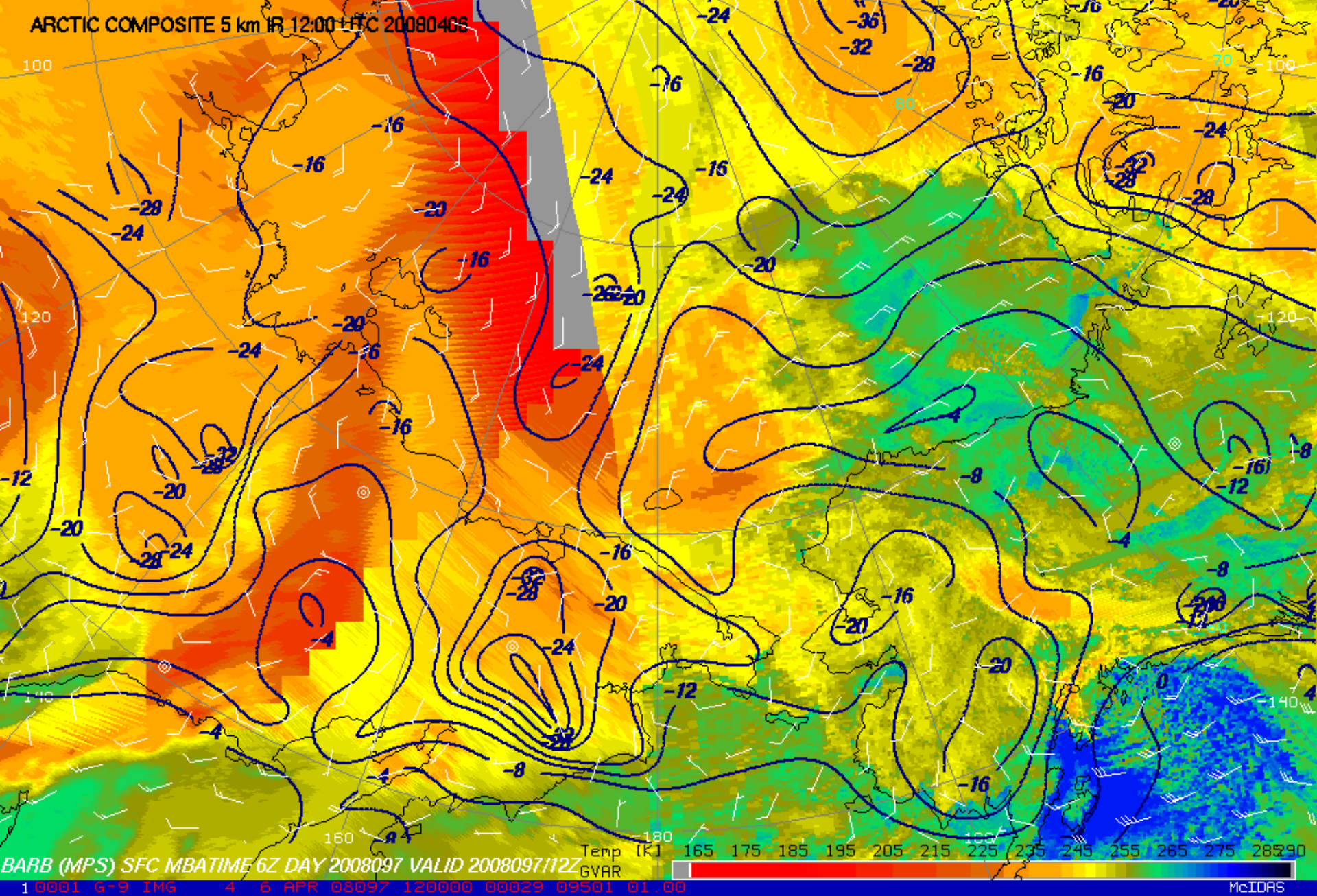
P (MB) MSL TIME 6Z DAY 2008097 VALID 2008097/12Z

1 0001 6-9 IMG 4 6 APR 08097 120000

McIDAS



ARCTIC COMPOSITE 5 km IR 12:00 UTC 20080406S

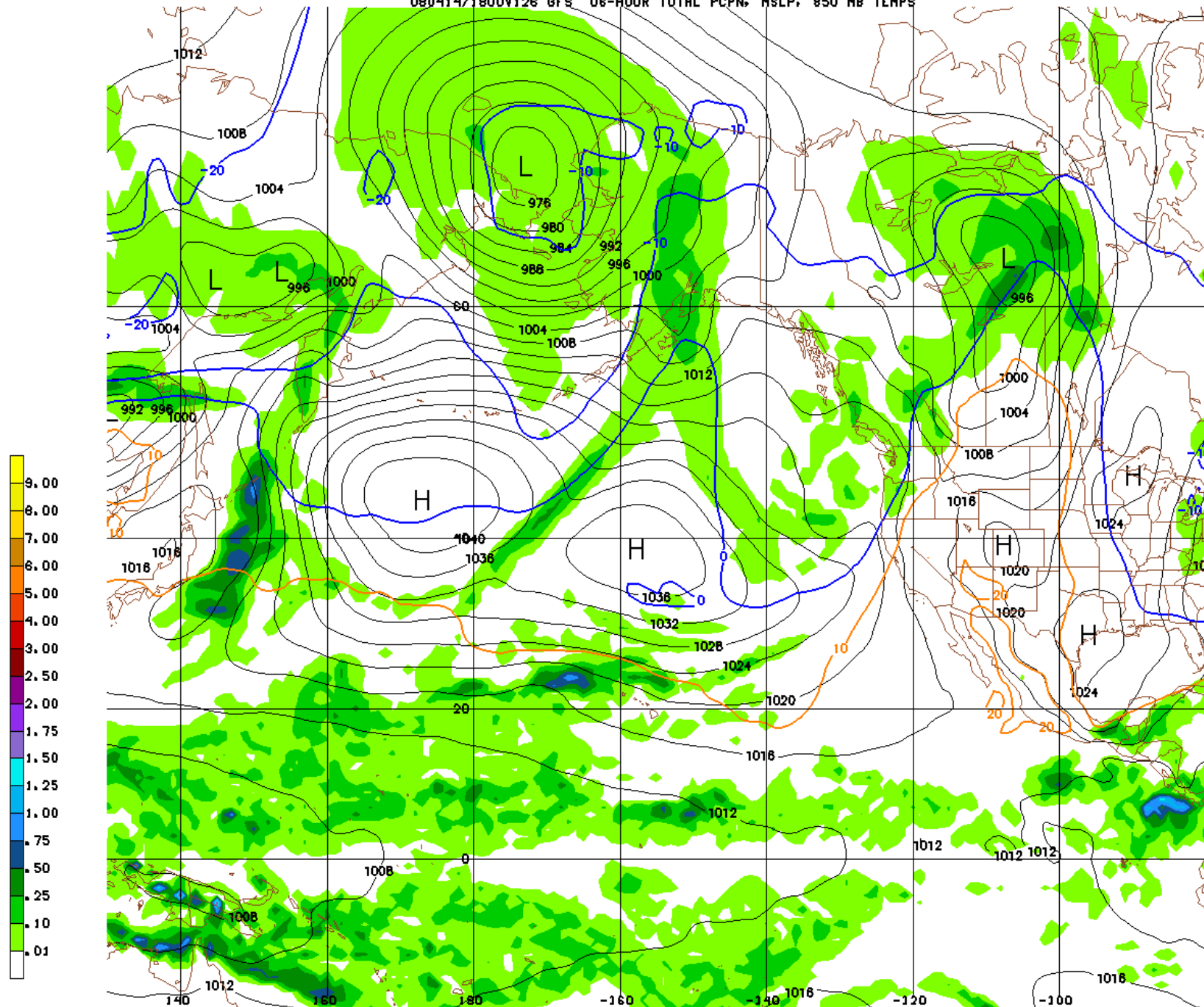


BARB (MPS) SFC MBATIME 6Z DAY 2008097 VALID 2008097/12Z

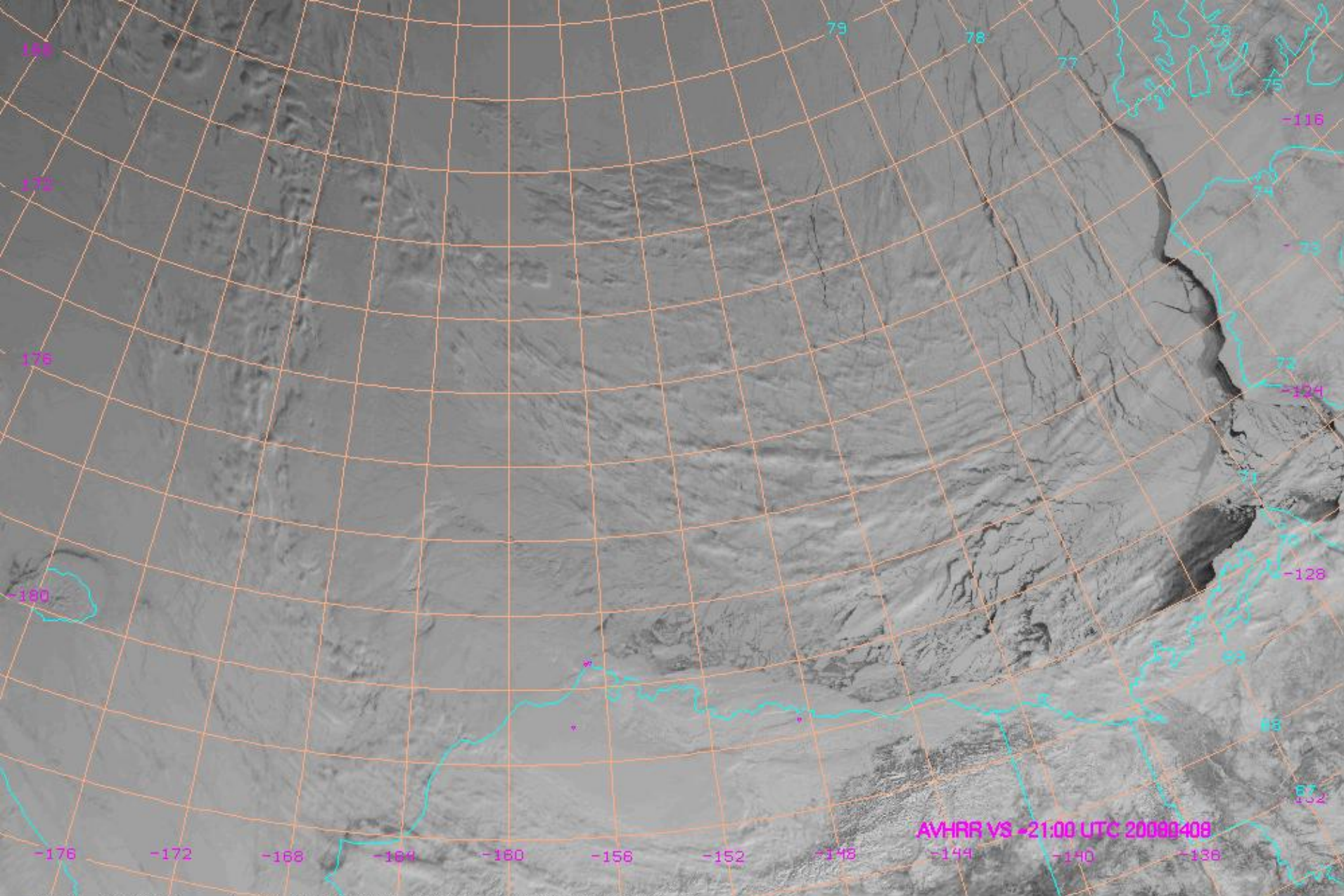
Temp (K)  
GVAR

165 175 185 195 205 215 225 235 245 255 265 275 285 290

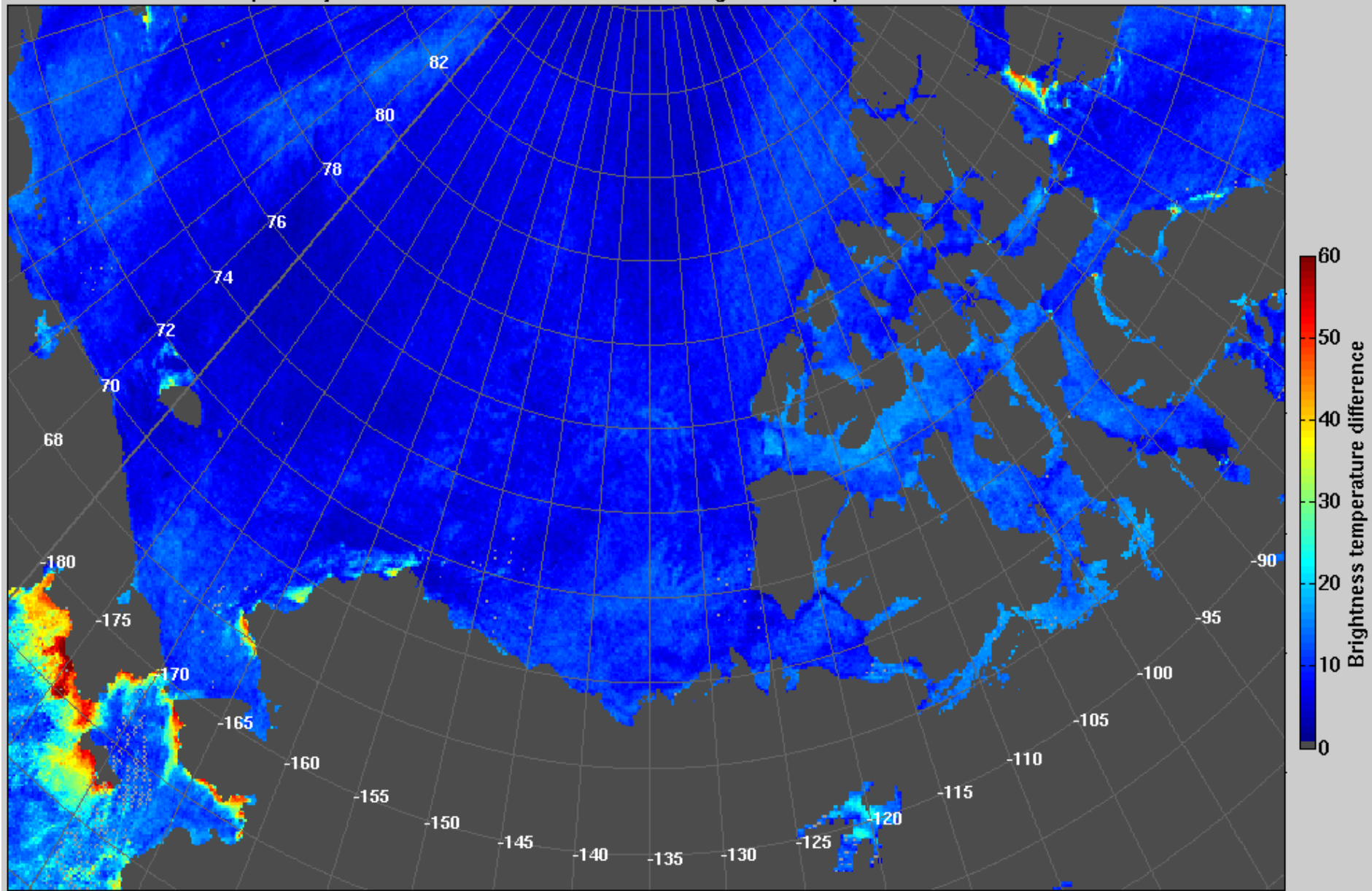
McIDAS

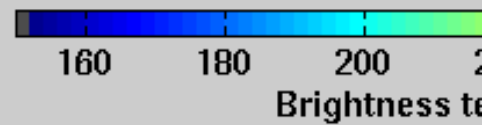
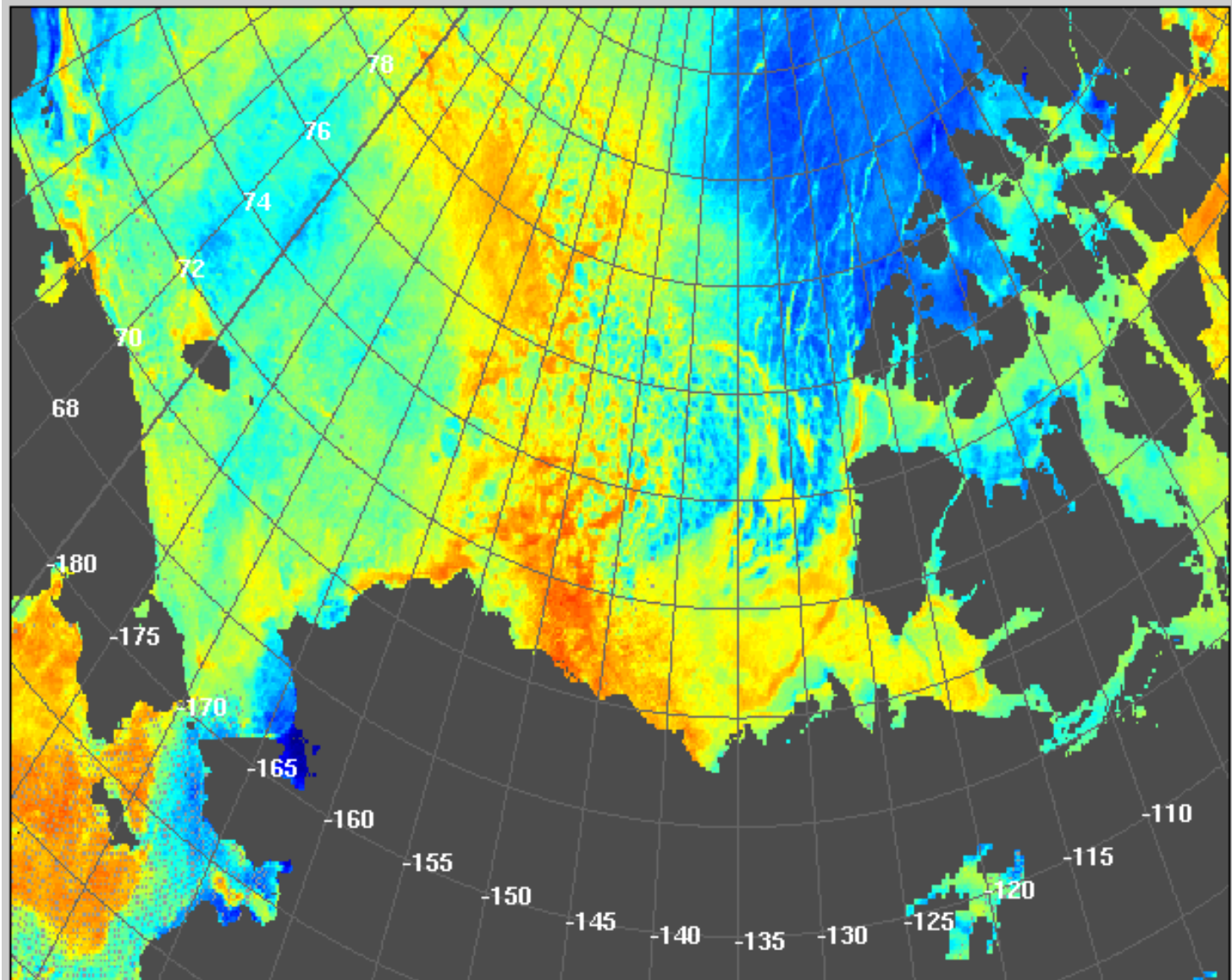








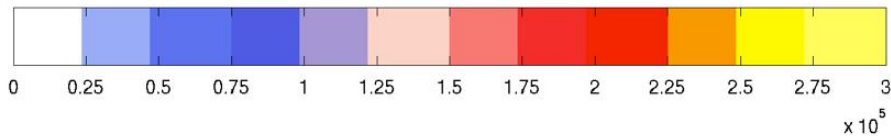
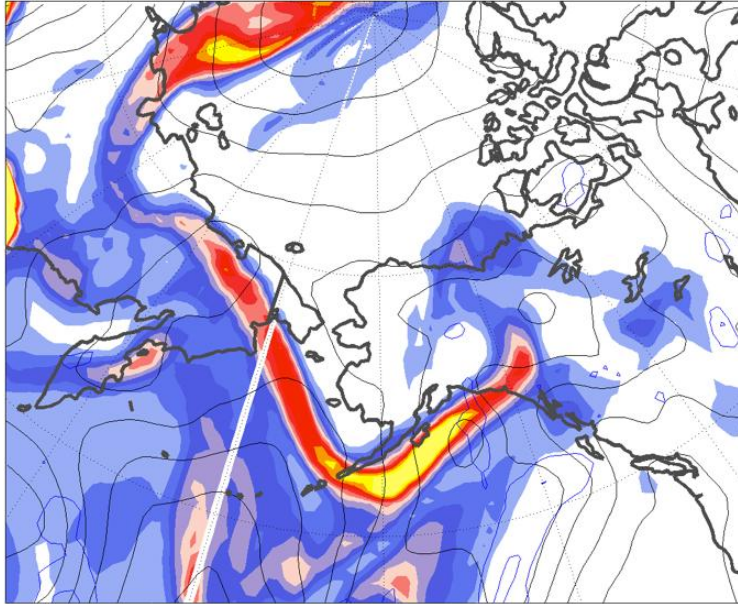




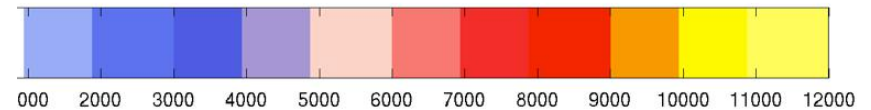
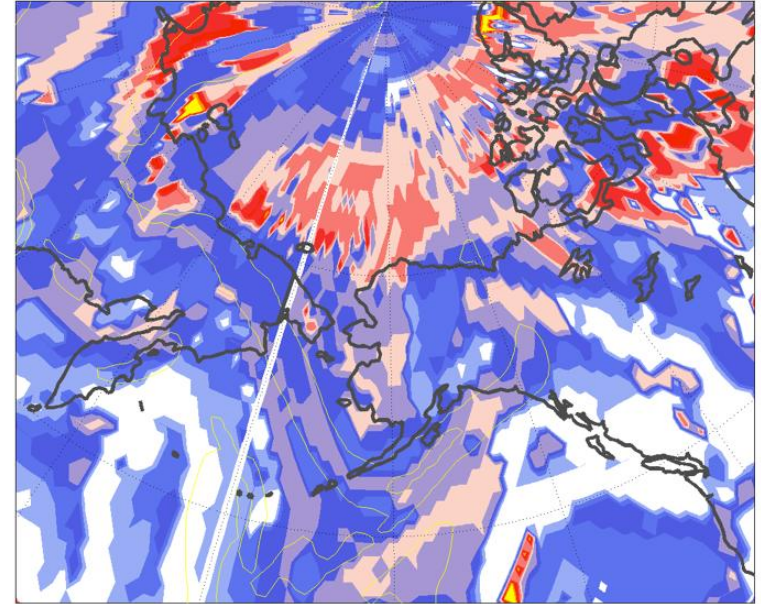


## biomass burning CO on 00Z 11 Apr

BB-CO on 00 UTC 2008-04-11 at level Total column



BB-CO at 0L (mg/m3, contours) on 00 UTC 2008-04-11 at level Total column



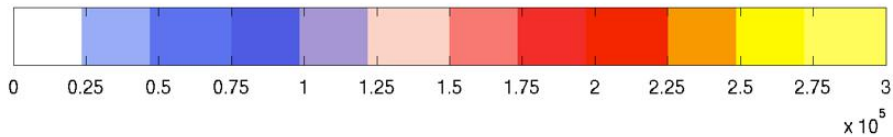
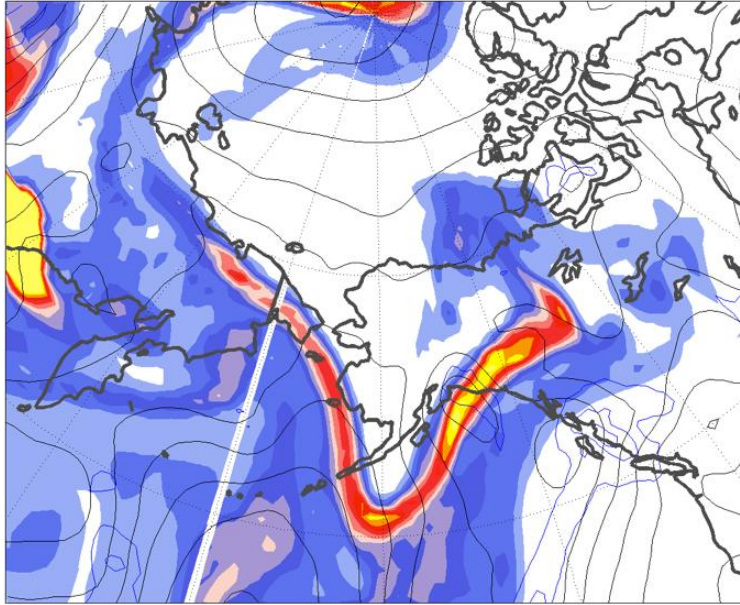
TOC CO

Alt of plume max

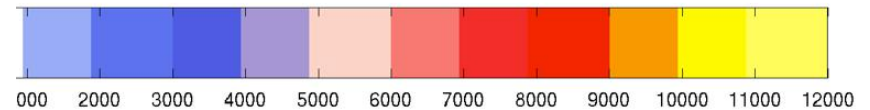
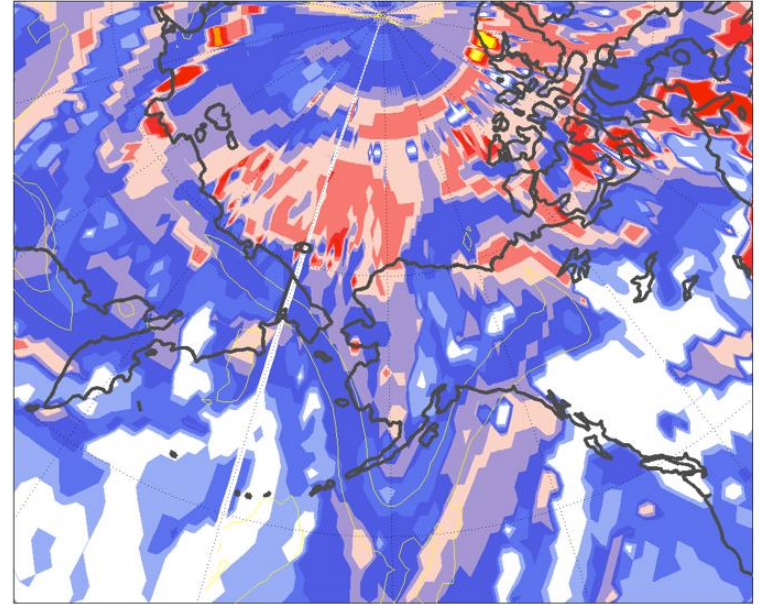
FC from 12Z 20080408

## biomass burning CO on 12Z 11 Apr

BB-CO on 12 UTC 2008-04-11 at level Total column



BB-CO at 0L (mg/m3, contours) on 12 UTC 2008-04-11 at level Total column



TOC CO

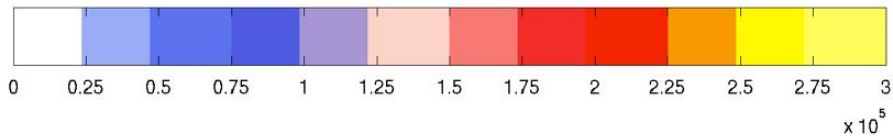
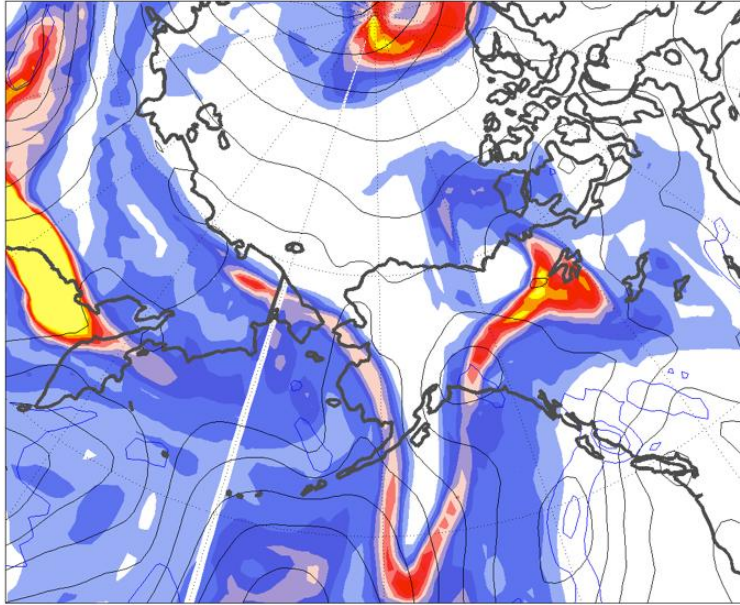
Alt of plume max

FC from 12Z 20080408

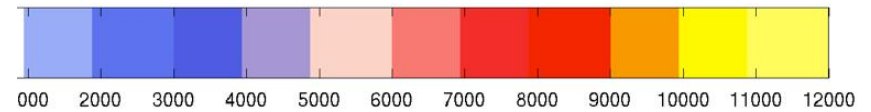
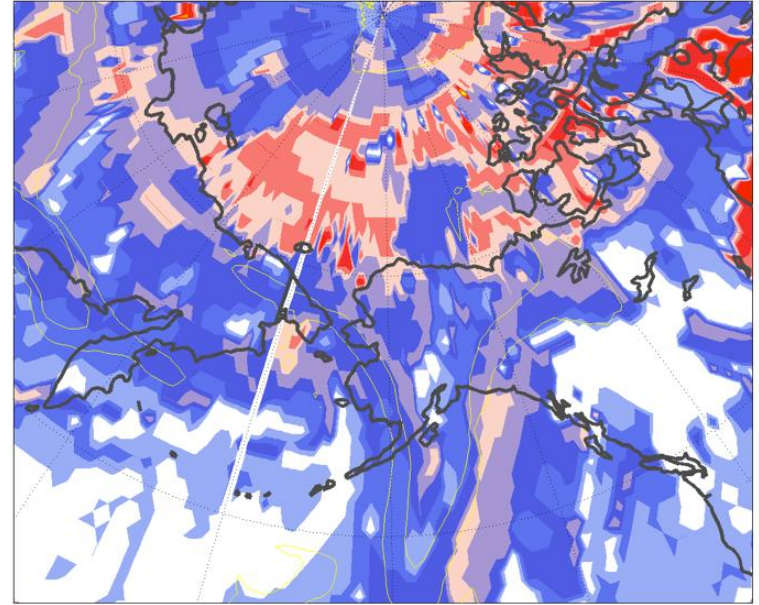


## biomass burning CO on 00Z 12 Apr

BB-CO on 00 UTC 2008-04-12 at level Total column



BB-CO at 0L (mg/m3, contours) on 00 UTC 2008-04-12 at level Total column



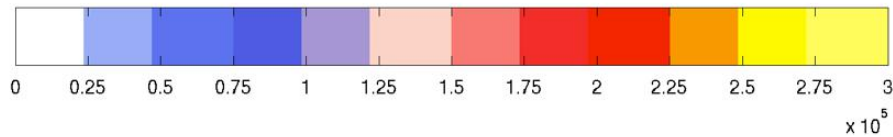
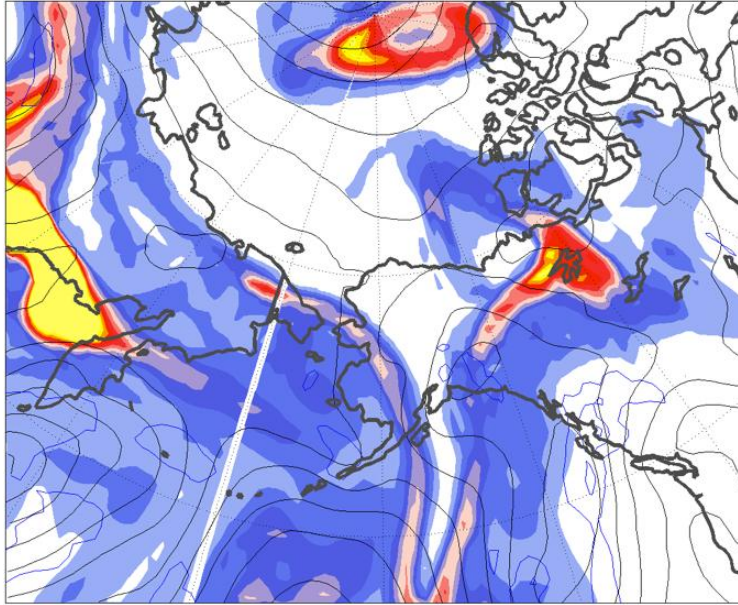
TOC CO

Alt of plume max

FC from 12Z 20080408

## Asian and biomass burning CO on 06Z 12 Apr

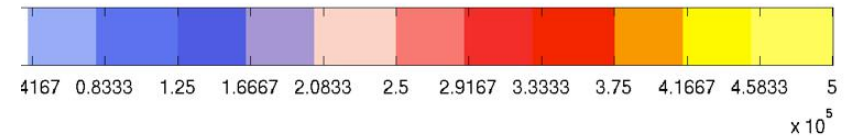
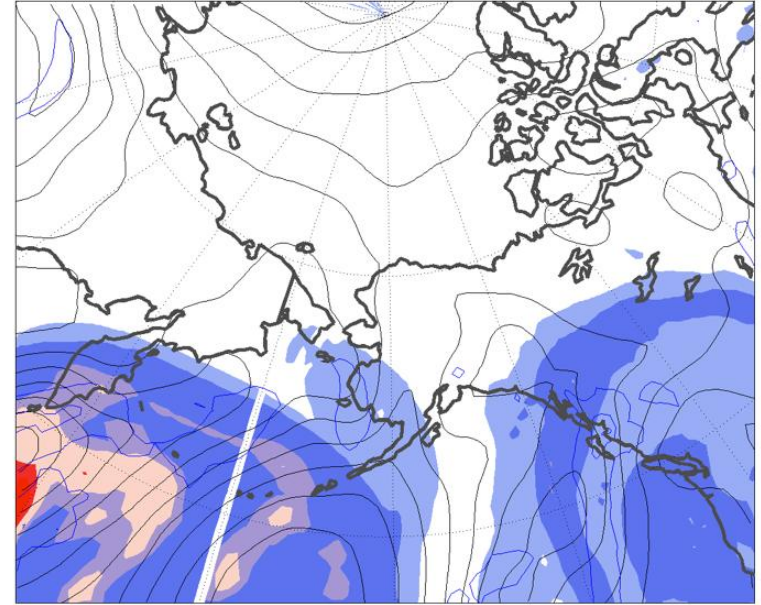
BB-CO on 06 UTC 2008-04-12 at level Total column



TOC CO biomass

FC from 12Z 20080408

AS-CO on 06 UTC 2008-04-12 at level Total column



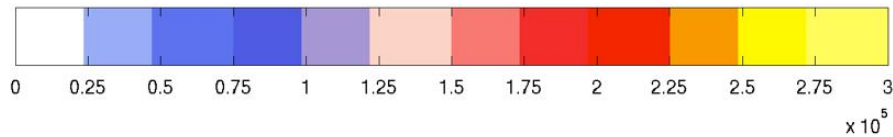
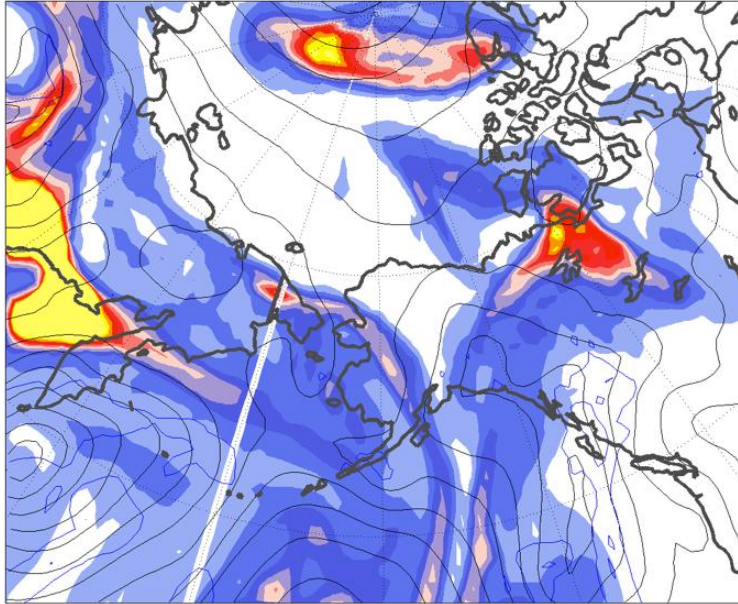
TOC CO Asia

FC from 06Z 20080409



## Asian and biomass burning CO on 12Z 12 Apr

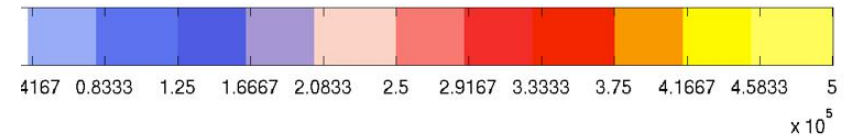
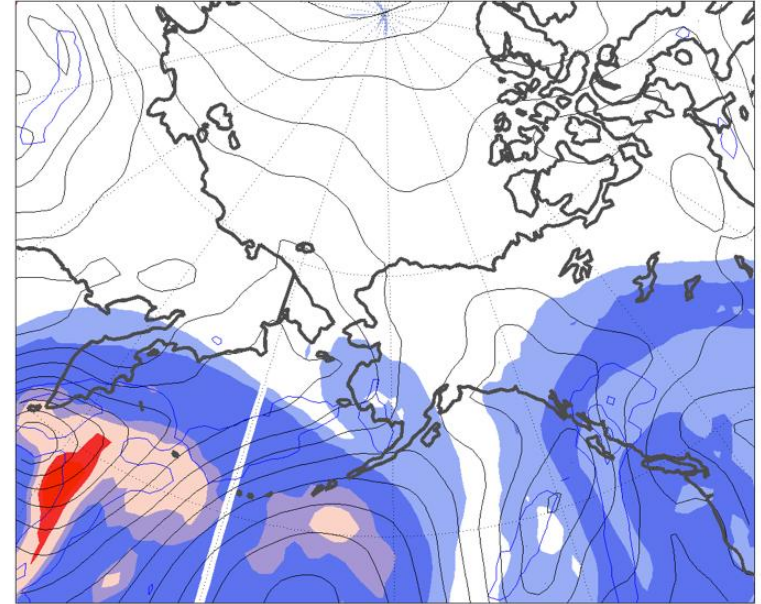
BB-CO on 12 UTC 2008-04-12 at level Total column



TOC CO biomass

FC from 12Z 20080408

AS-CO on 12 UTC 2008-04-12 at level Total column

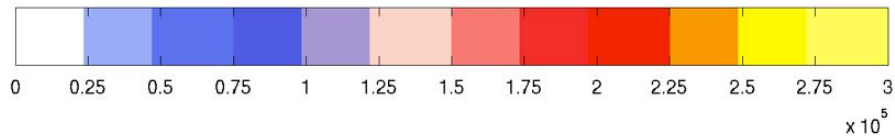
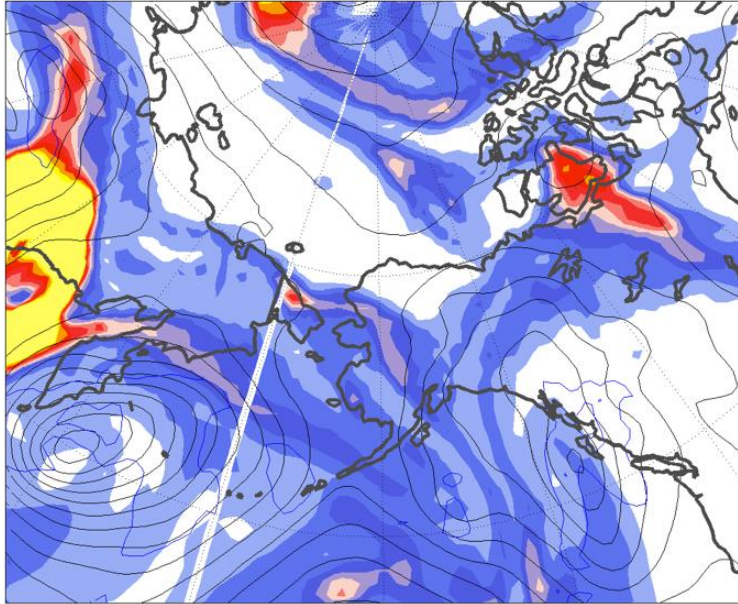


TOC CO Asia

FC from 06Z 20080409

## Asian and biomass burning CO on 00Z 13 Apr

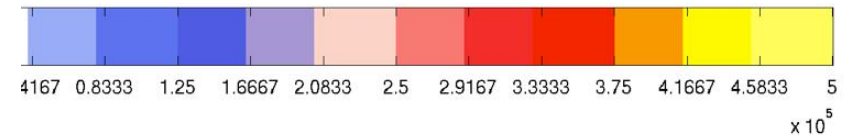
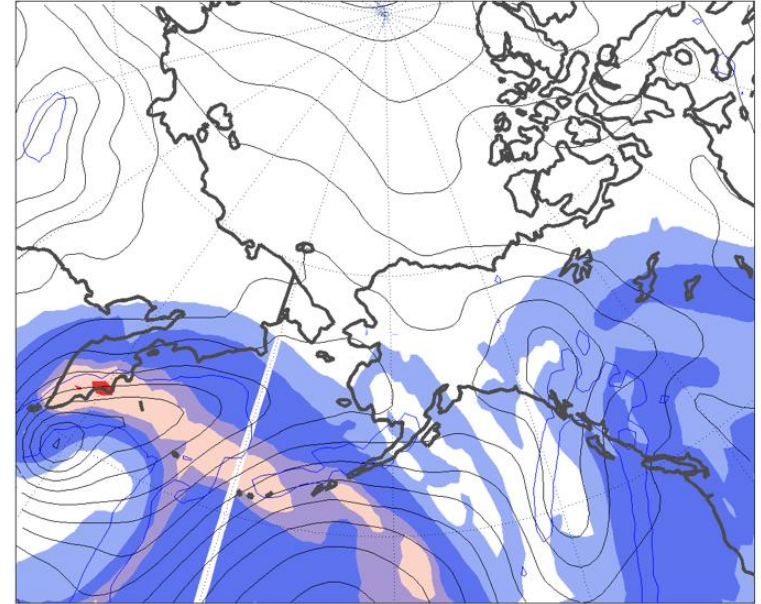
BB-CO on 00 UTC 2008-04-13 at level Total column



TOC CO biomass

FC from 12Z 20080408

AS-CO on 00 UTC 2008-04-13 at level Total column



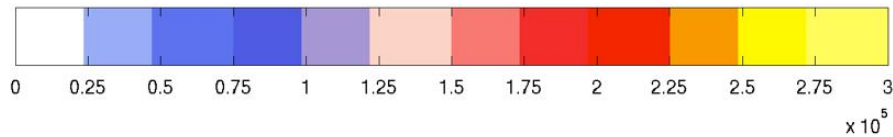
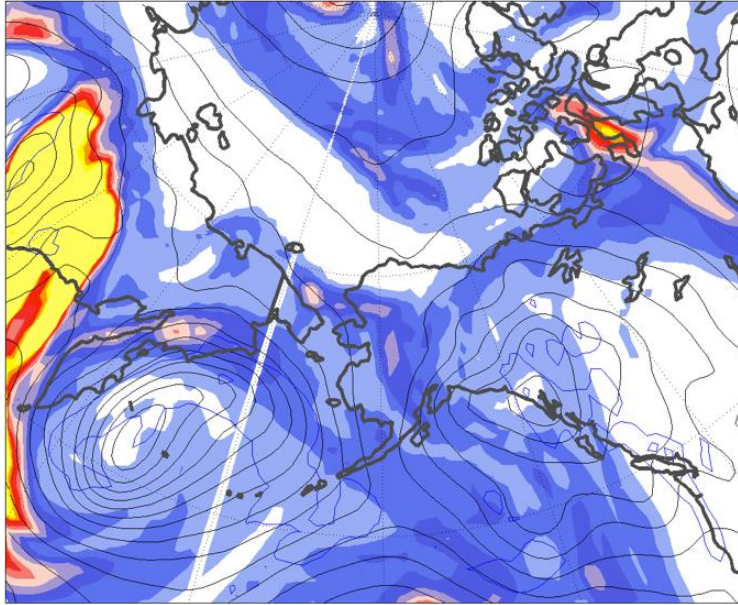
TOC CO Asia

FC from 06Z 20080409



## Asian and biomass burning CO on 12Z 13 Apr

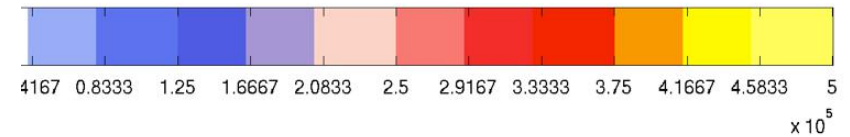
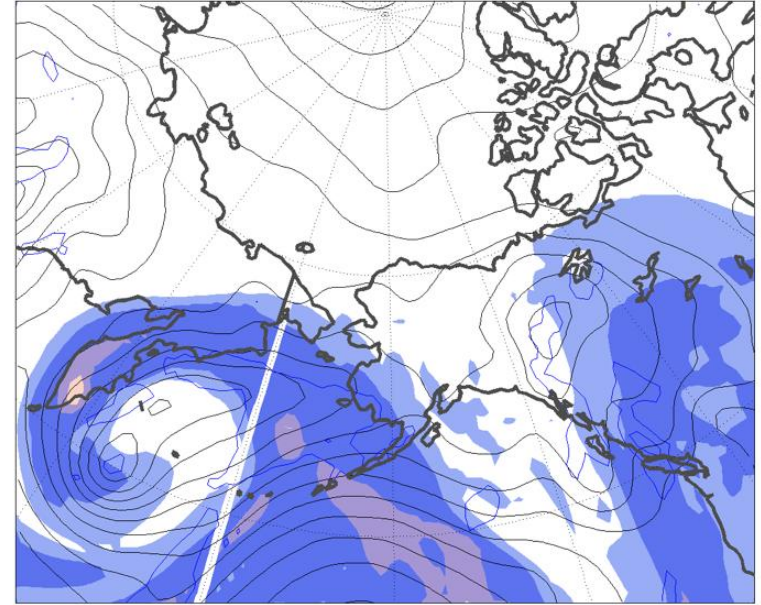
BB-CO on 12 UTC 2008-04-13 at level Total column



TOC CO biomass

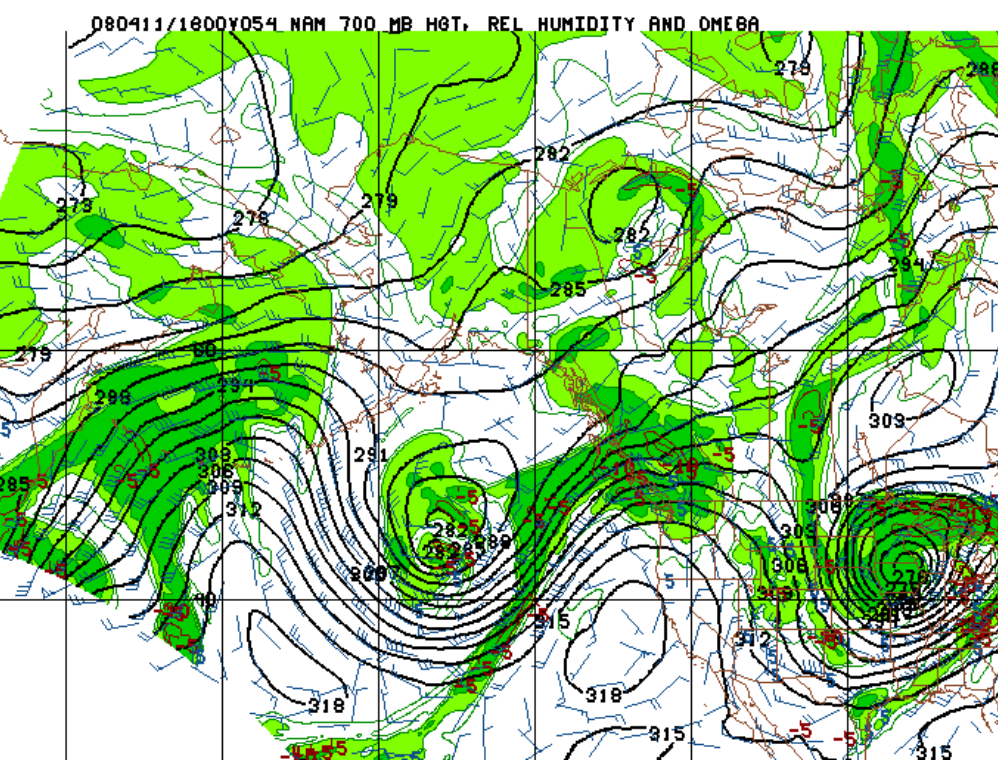
FC from 12Z 20080408

AS-CO on 12 UTC 2008-04-13 at level Total column

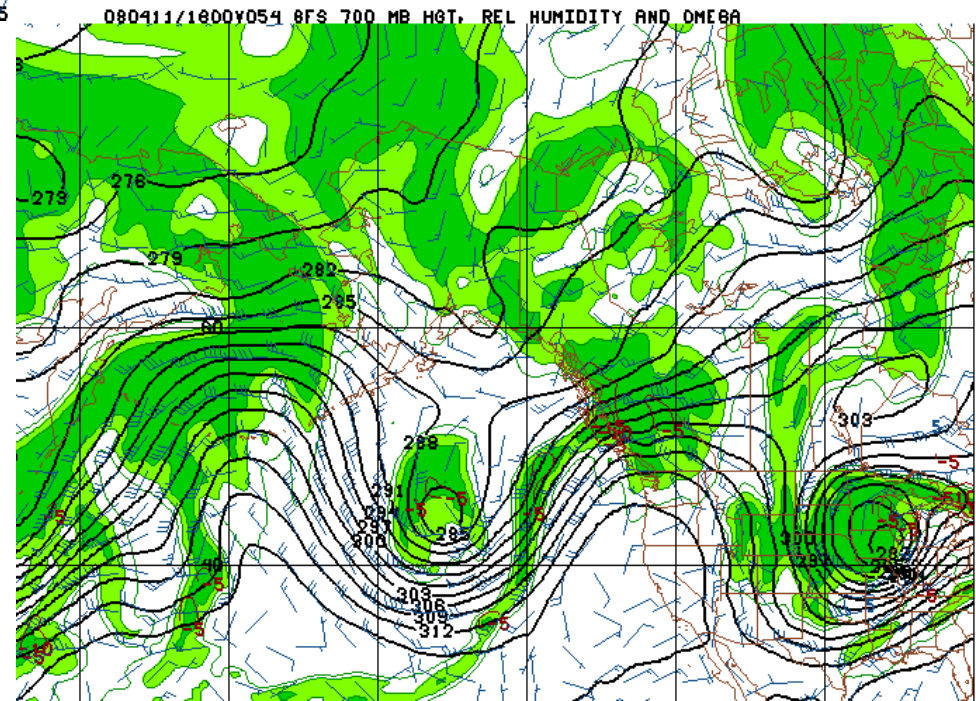


TOC CO Asia

FC from 06Z 20080409



# Friday: GFS vs NAM



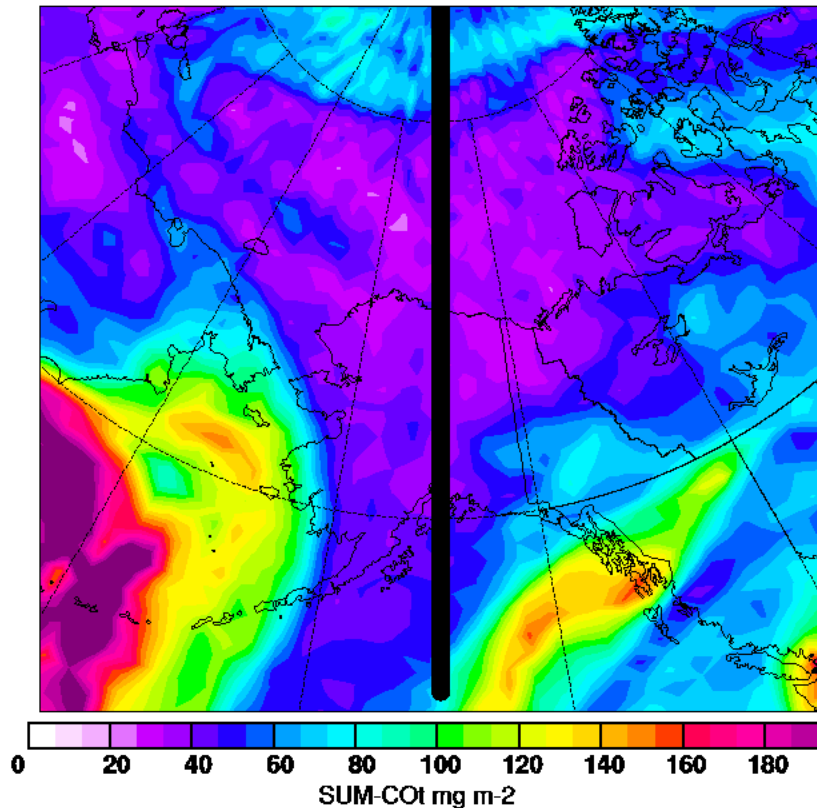
# Fri. and Sat.:Anthropogenic CO

**Total column of species SUM-CO for age class 0 - 20.00 DAYS**

Latest analysis time 20080409. 60000 Actual time 20080411.180000

Mean value 0.950E+02 Maximum value 0.735E+03 Minimum value 0.1

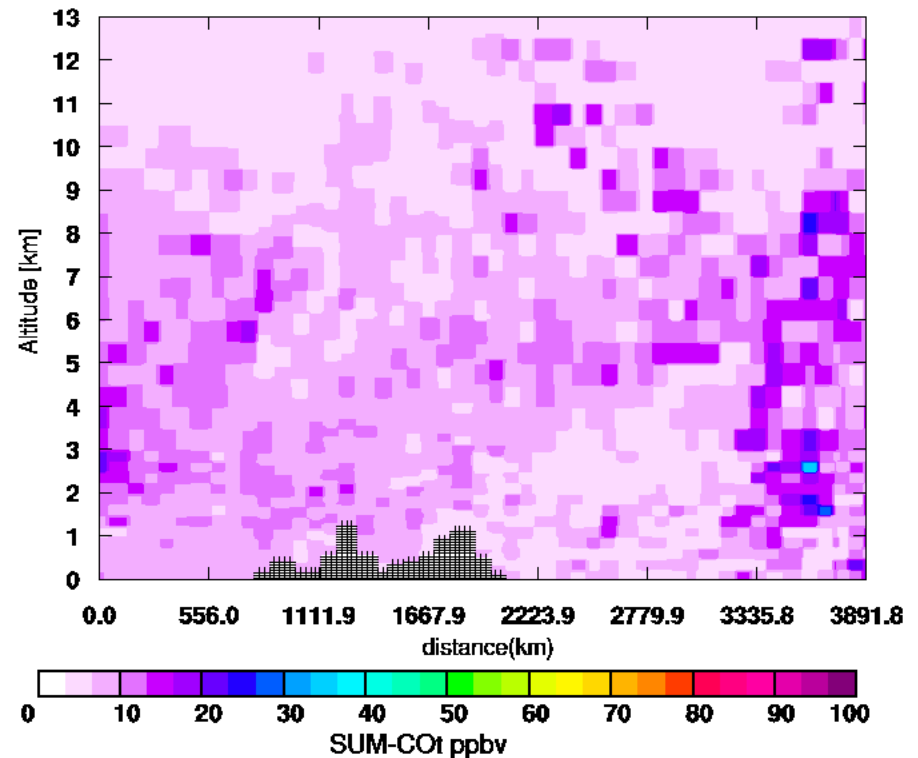
Distance of grid lines 20.0 deg



CROSS SECTION FROM 52 TO 87 LATITUDE AND -150 TO -146 LONGITUDE

NA-CO<sub>t</sub> MIXING RATIO FOR AGE CLASS 0 - 20.00 DAYS

LATEST ANALYSIS 20080409 60000 UTC ACTUAL TIME 20080411 18



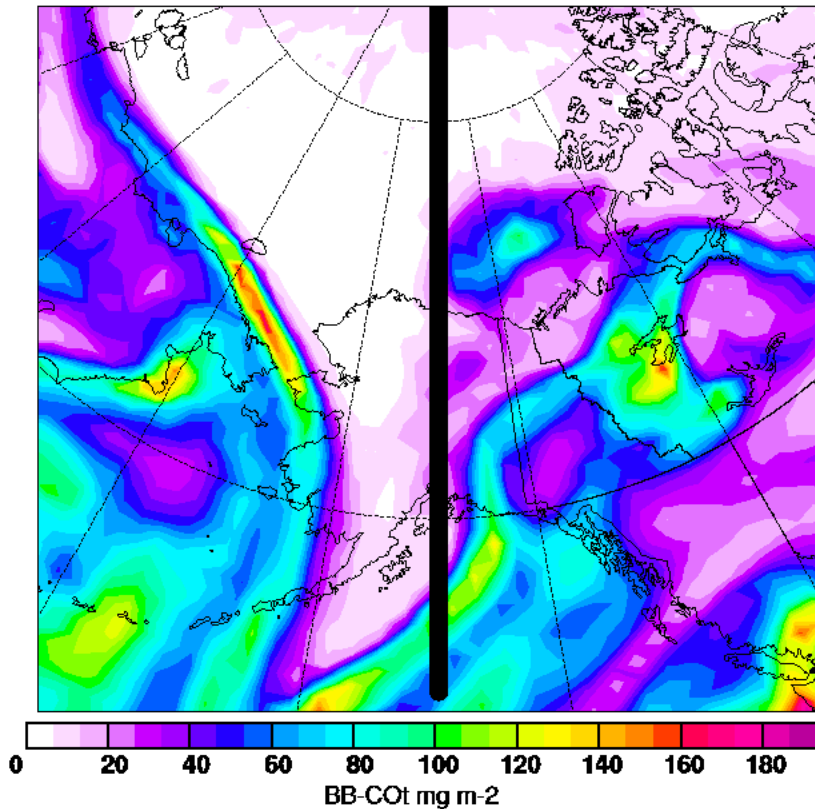
# Biomass Burning

**Total column of species BB-COt for age class 0 - 20.00 DAYS**

Latest analysis time 20080409. 60000 Actual time 20080411.180000

Mean value 0.421E+02 Maximum value 0.843E+03 Minimum value 0.2

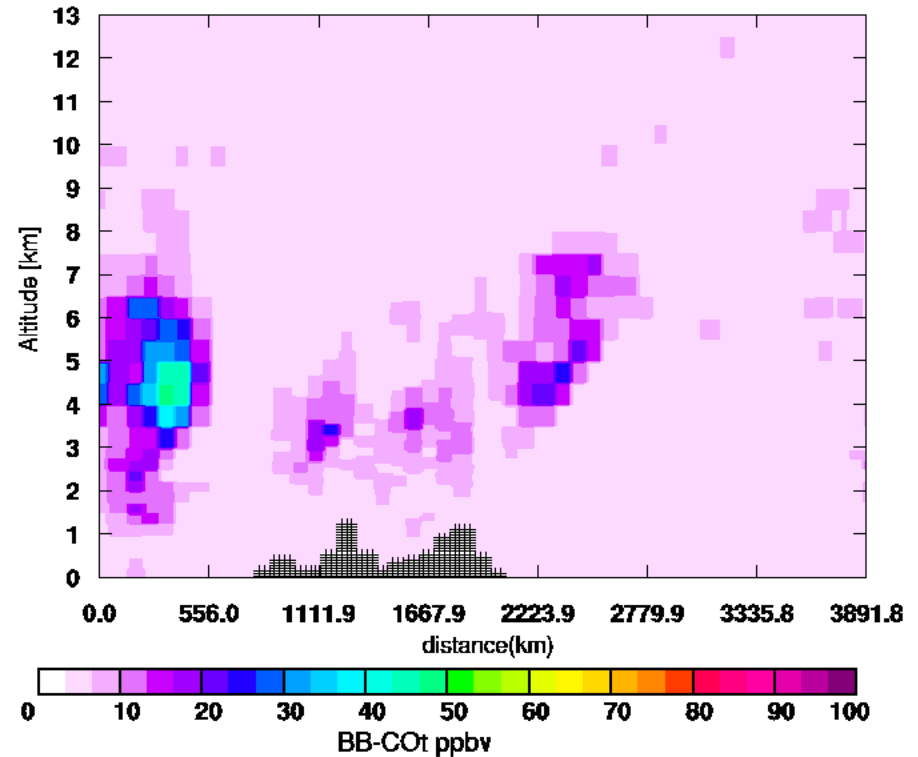
Distance of grid lines 20.0 deg



CROSS SECTION FROM 52 TO 87 LATITUDE AND -150 TO -146 LONGITUDE

BB-COt MIXING RATIO FOR AGE CLASS 0 - 20.00 DAYS

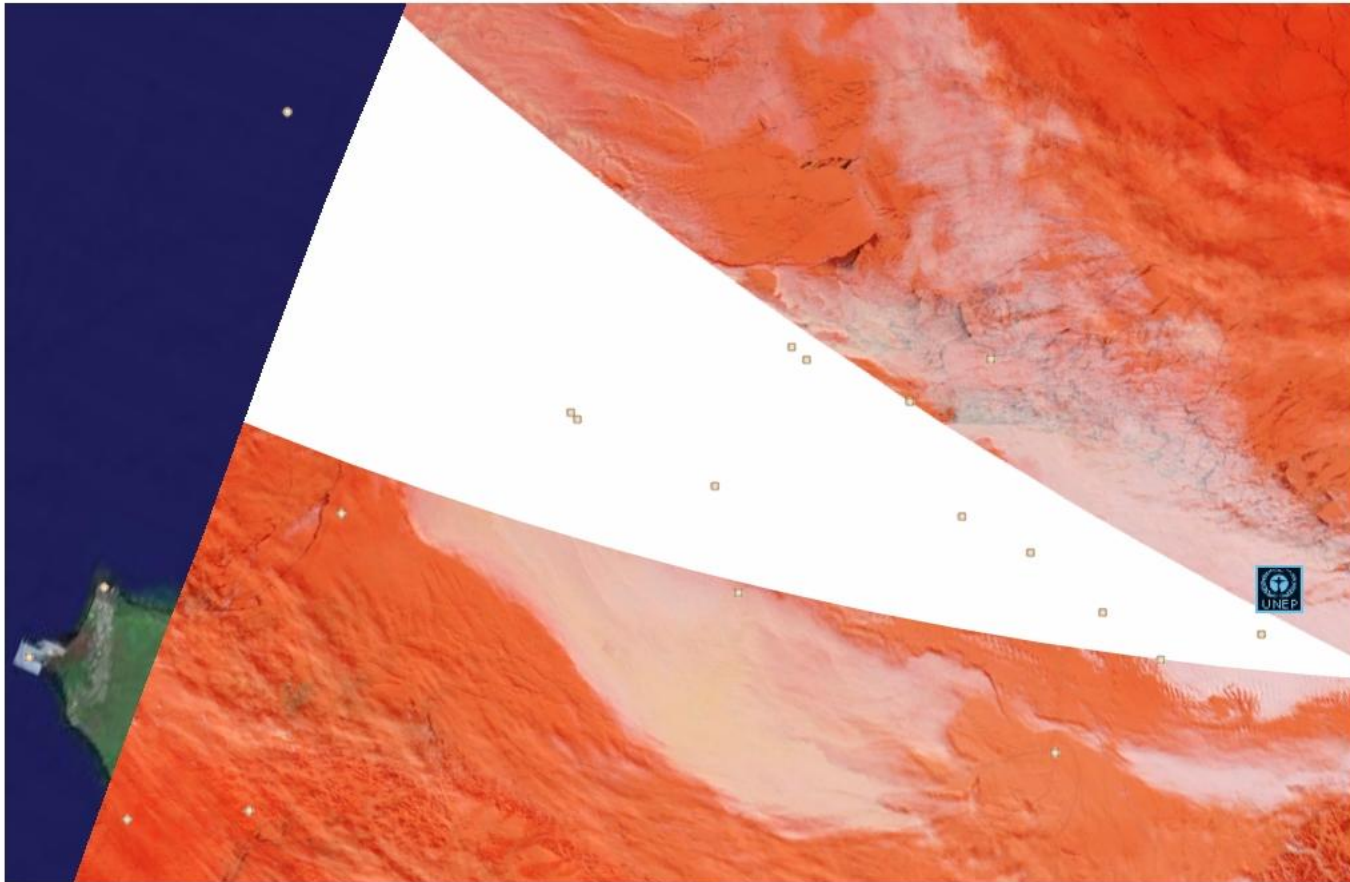
LATEST ANALYSIS 20080409 60000 UTC ACTUAL TIME 20080411 18

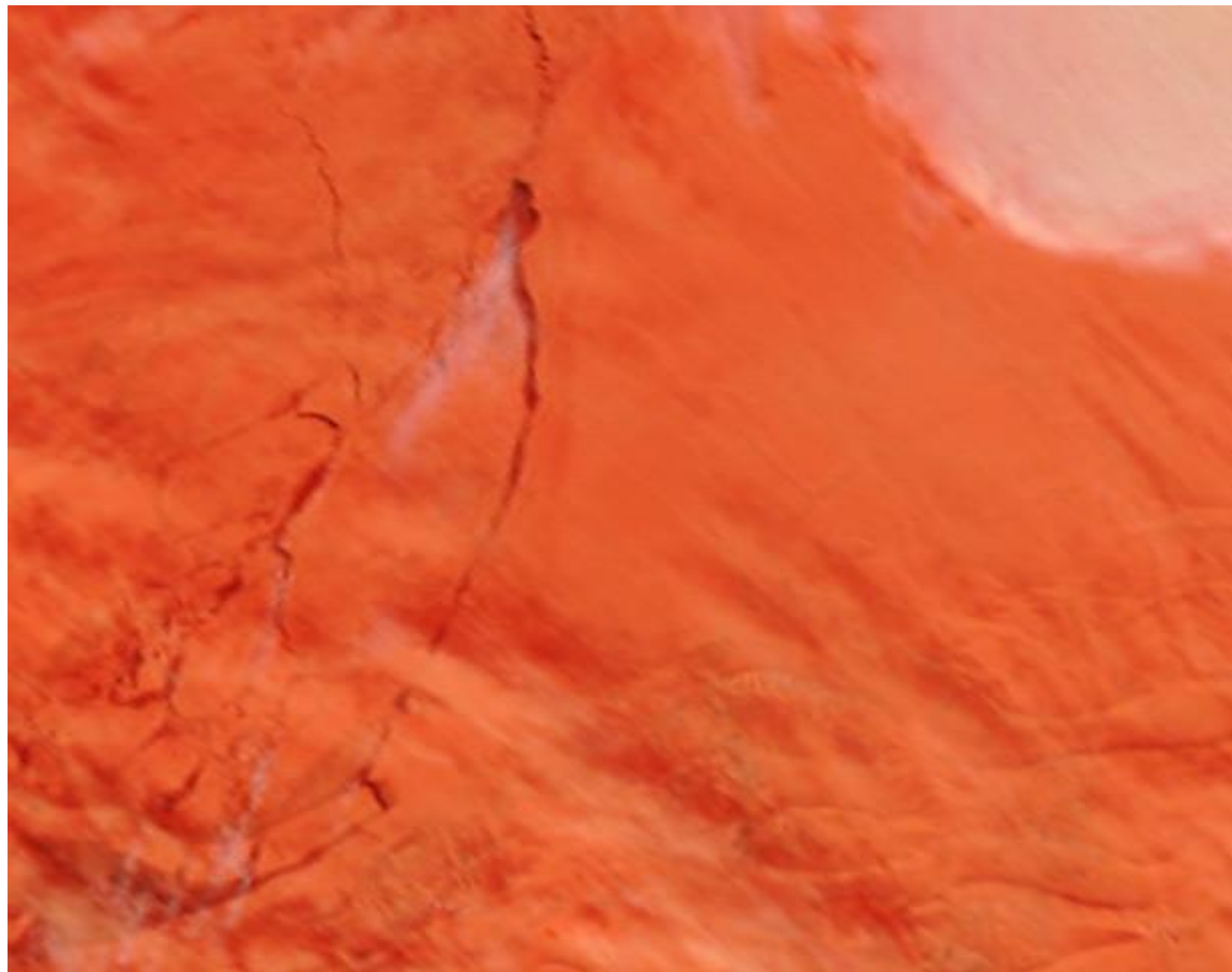




# Convective cloud over lead(s)

## April 9, 00Z





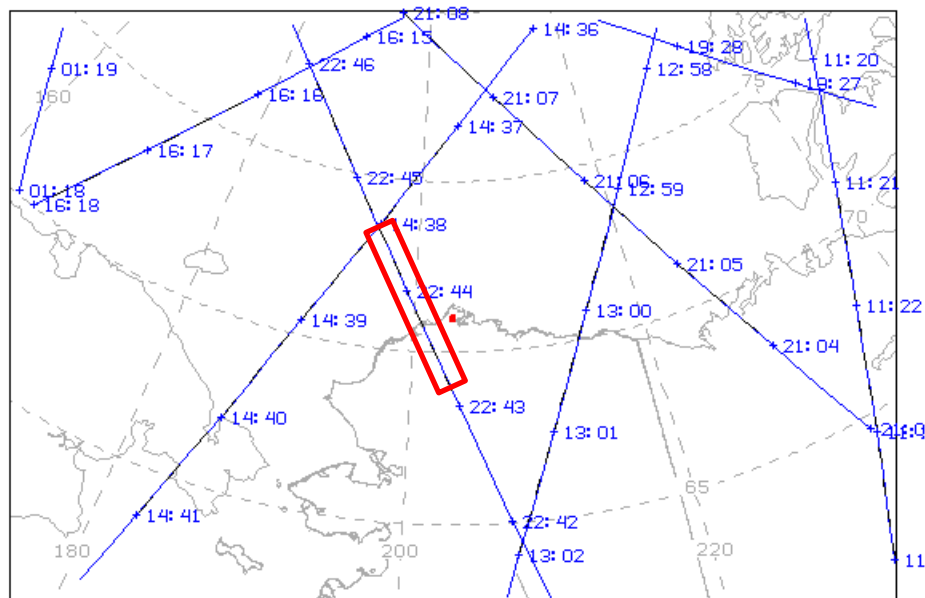
# **RAQMS Fairbanks Local FX Discussion:**

**00Z 04/12/2008  
(84hr)**

**00Z 04/13/2008  
(108hr)**

**initialized 12Z 04/08/2008**

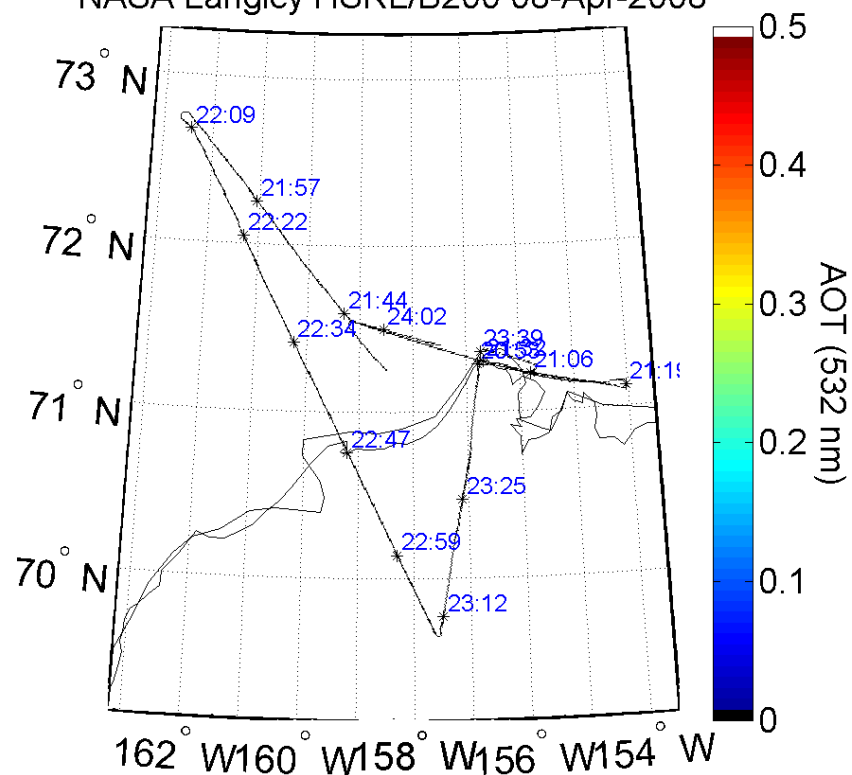


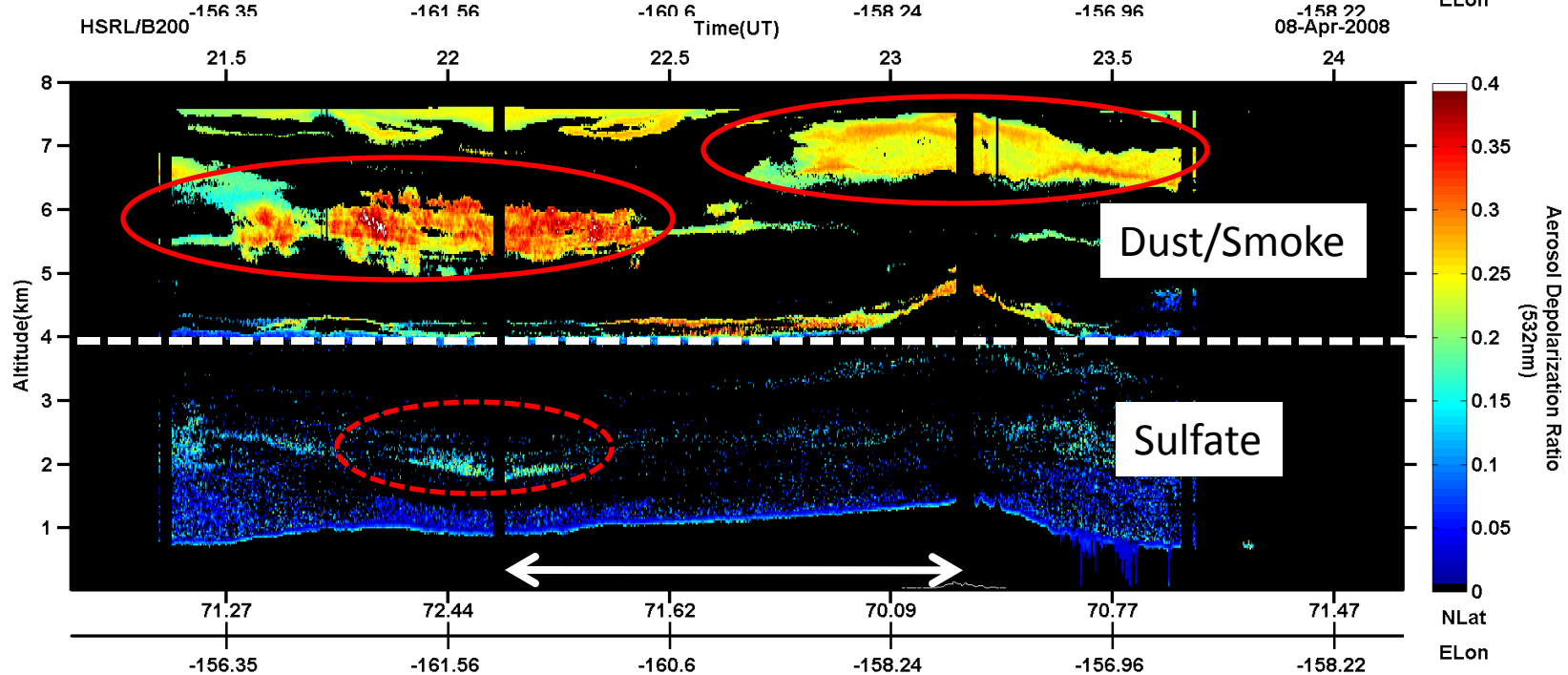
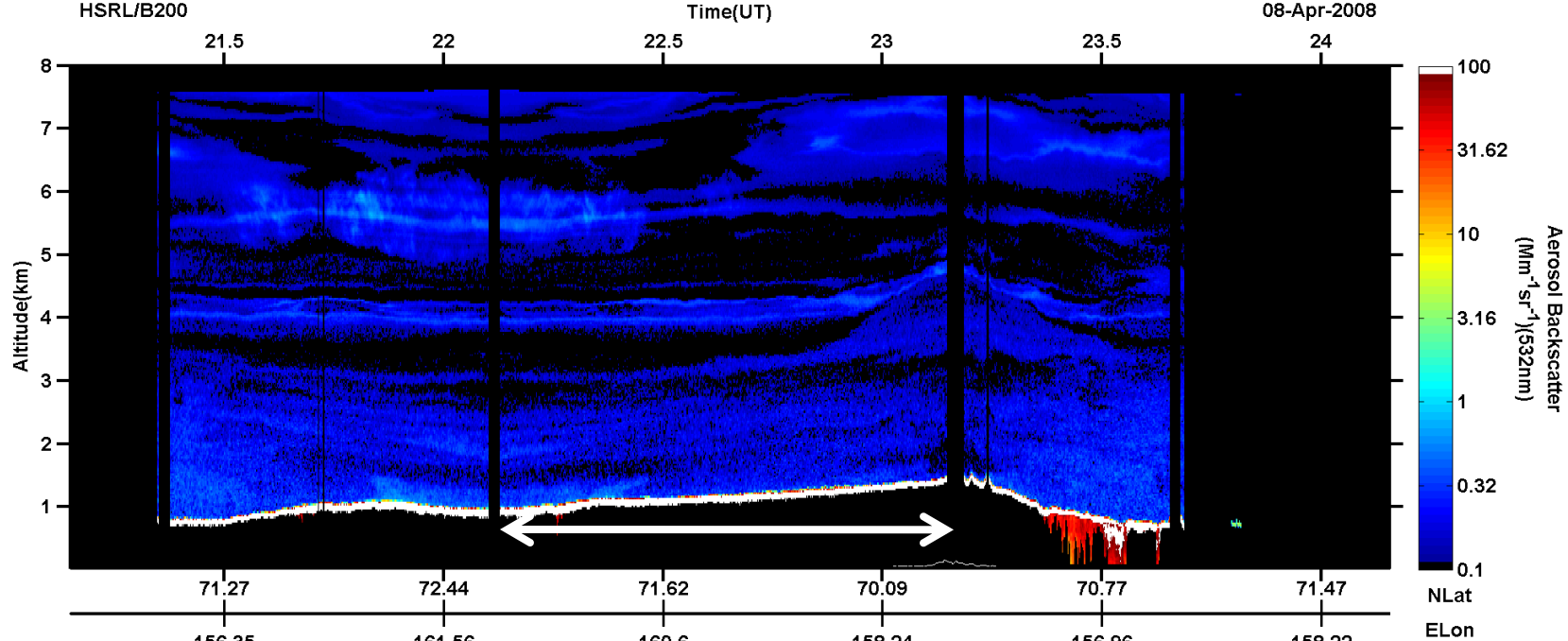


CALIPSO 2008/04/08 UTC CALIPSO ORBITAL PREDICT PLOT EPOCH DATE: 08/04/07  
 ■ lat: 71.333 lon: 203.334 res: 9 km

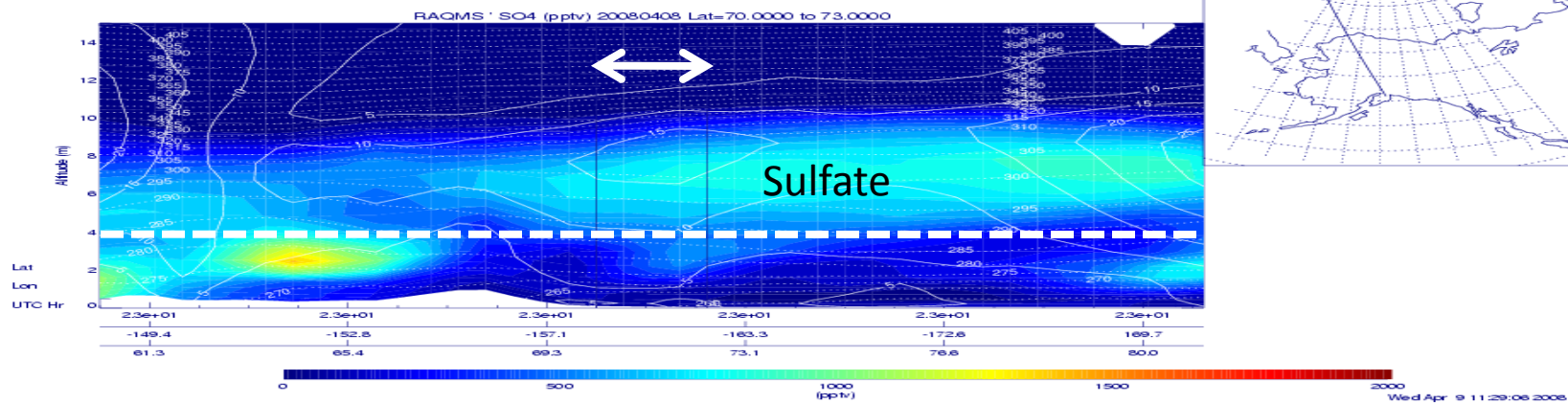
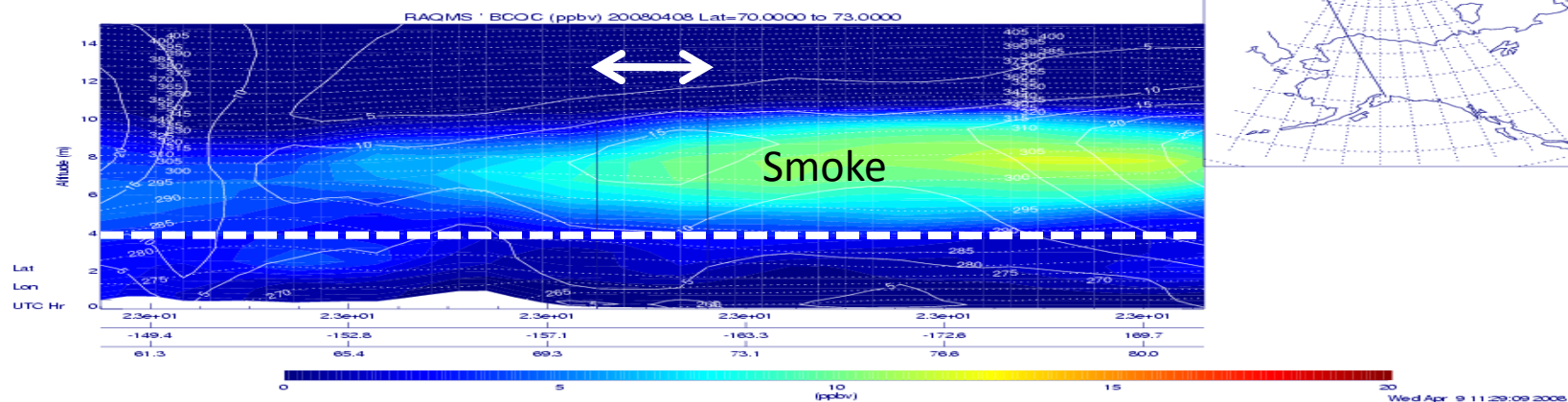
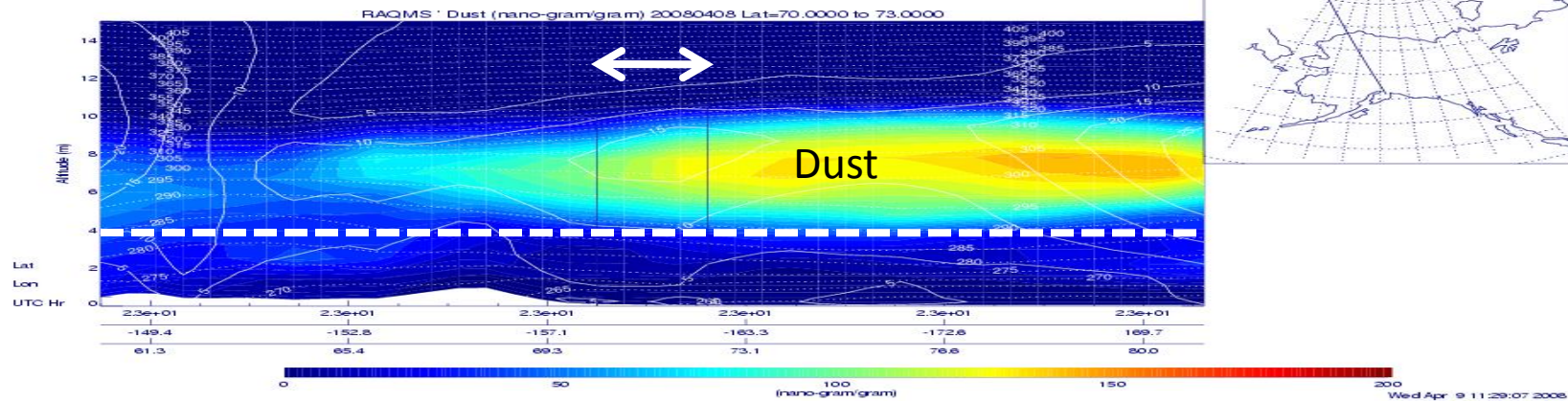
## HSRL CALIPSO Validation

NASA Langley HSRL/B200 08-Apr-2008



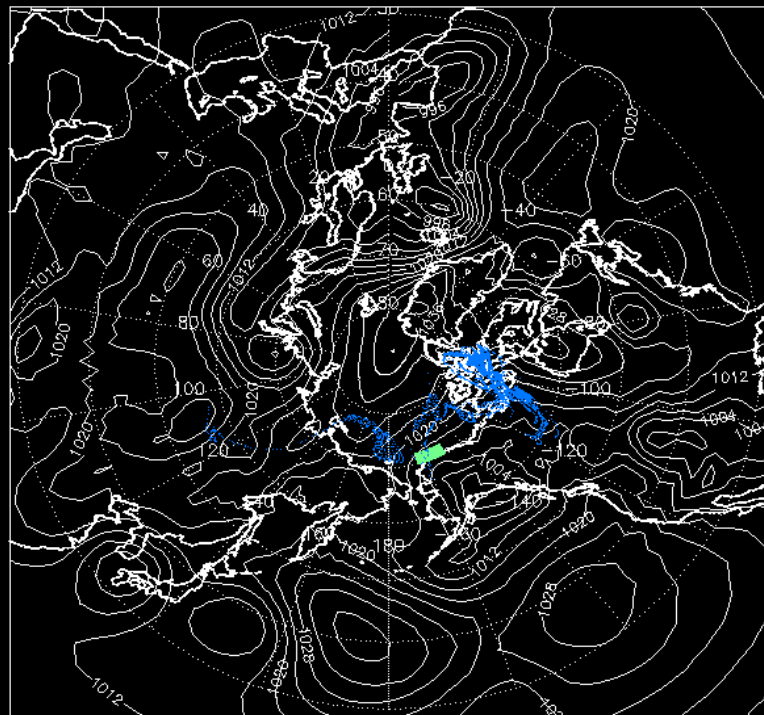


# RAQMS 04/08/2008 aerosol analysis along CALIPSO Track





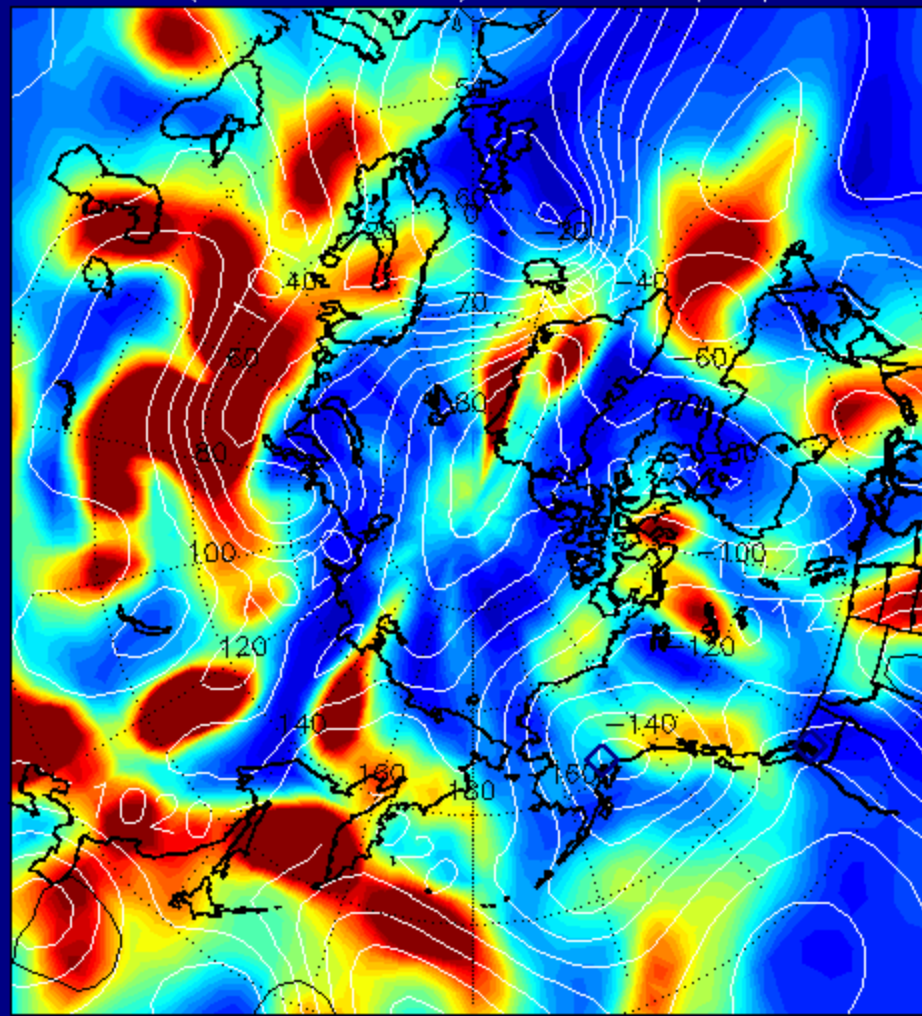
2008041000 Initial (Blue) and Final (Green) Lat/Lon  
(Barrow Parcels below 5km)



00Z 04/10 (Wed afternoon)

AOD Total Aerosol 00Z 20080410

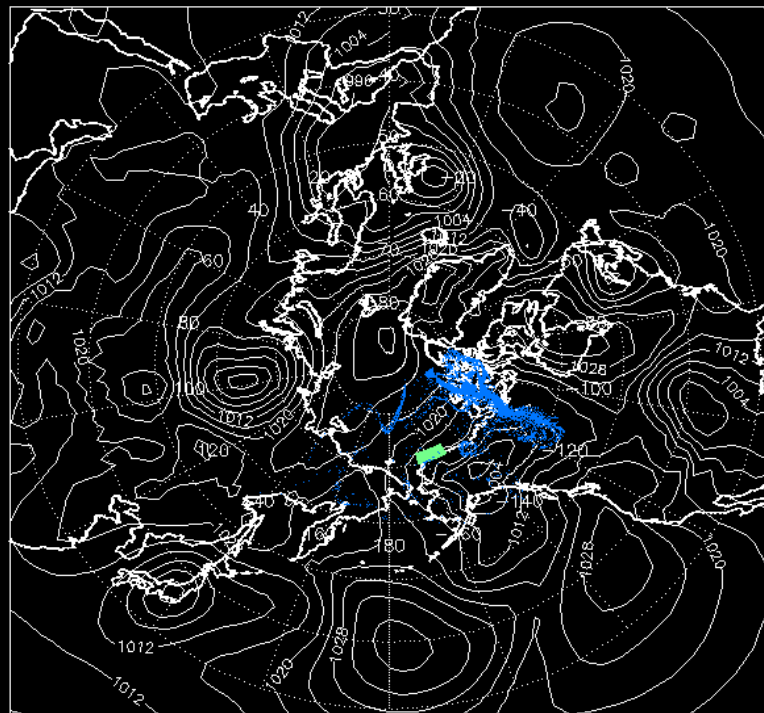
(MSL Pressure Contoured/95% Convective Precip=Red)



0.0 0.2 0.4 0.6 0.8 1.0

RAQMS<sub>6</sub> 24hr ASSIM + 36hr Fx Initialized 12Z 20080407

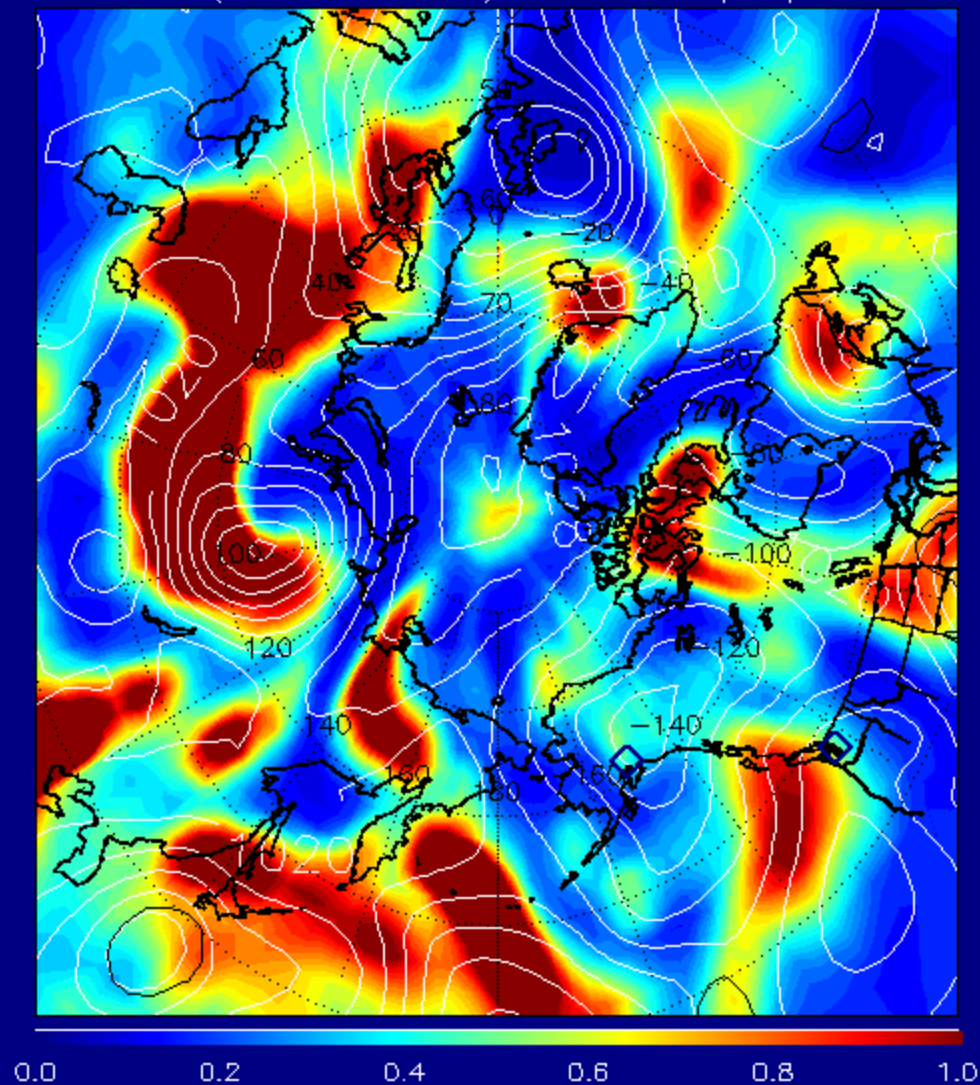
2008041100 Initial (Blue) and Final (Green) Lat/Lon  
(Barrow Parcels below 5km)



00Z 04/10 (Wed afternoon)

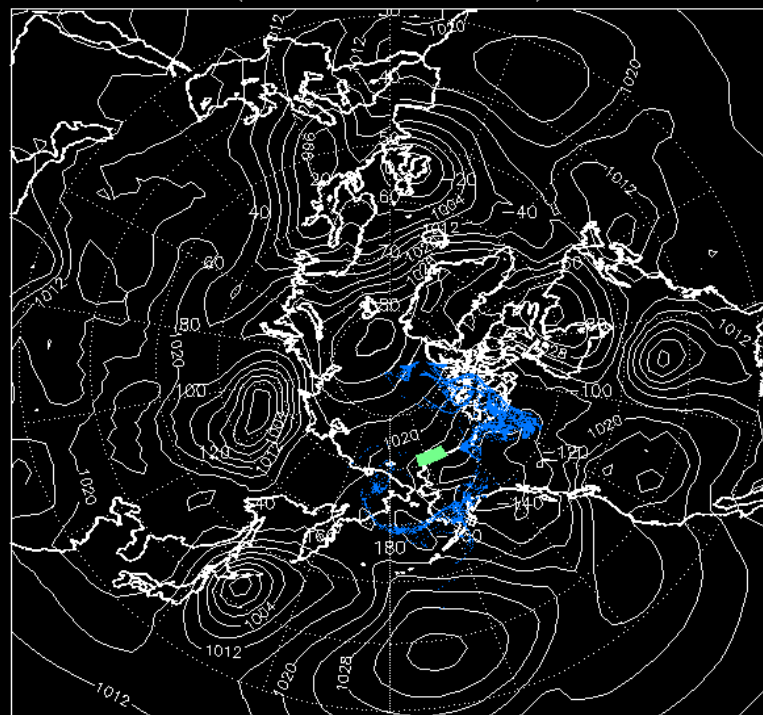
AOD Total Aerosol 00Z 20080411

(MSL Pressure Contoured/95% Convective Precip=Red)



RAQMS<sub>6</sub> 24hr ASSIM + 60hr Fx Initialized 12Z 20080407

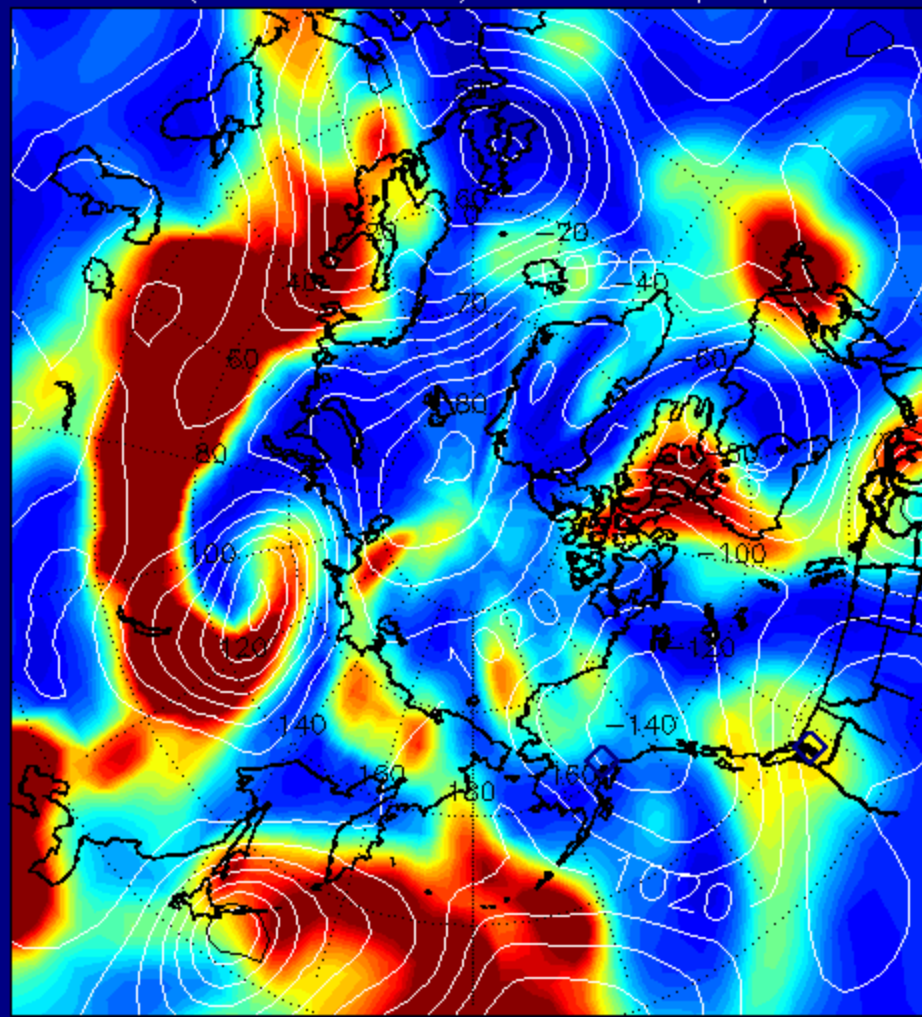
2008041200 Initial (Blue) and Final (Green) Lat/Lon  
(Barrow Parcels below 5km)



00Z 04/10 (Wed afternoon)

AOD Total Aerosol 00Z 20080412

(MSL Pressure Contoured/95% Convective Precip=Red)

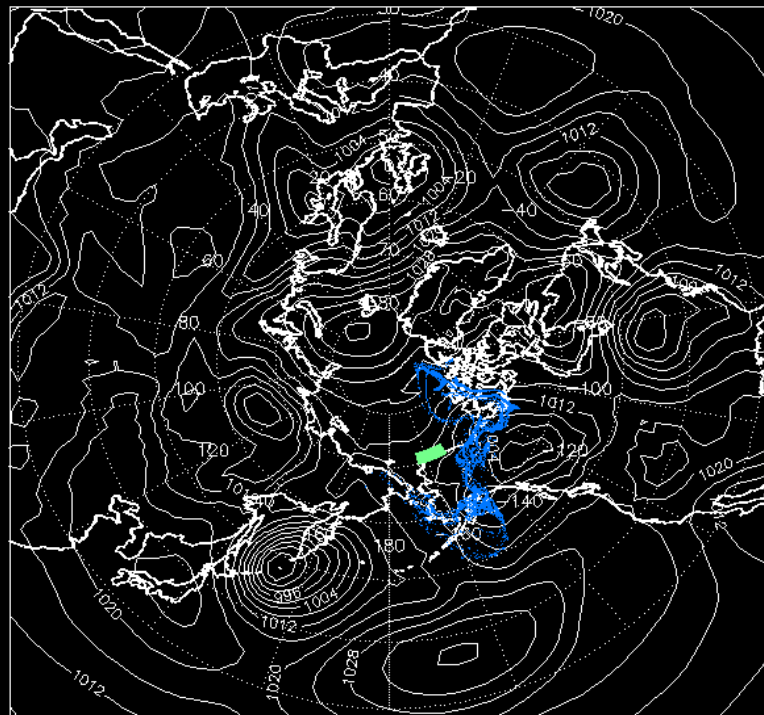


0.0 0.2 0.4 0.6 0.8 1.0

RAQMS<sub>6</sub> 24hr ASSIM + 84hr Fx Initialized 12Z 20080407

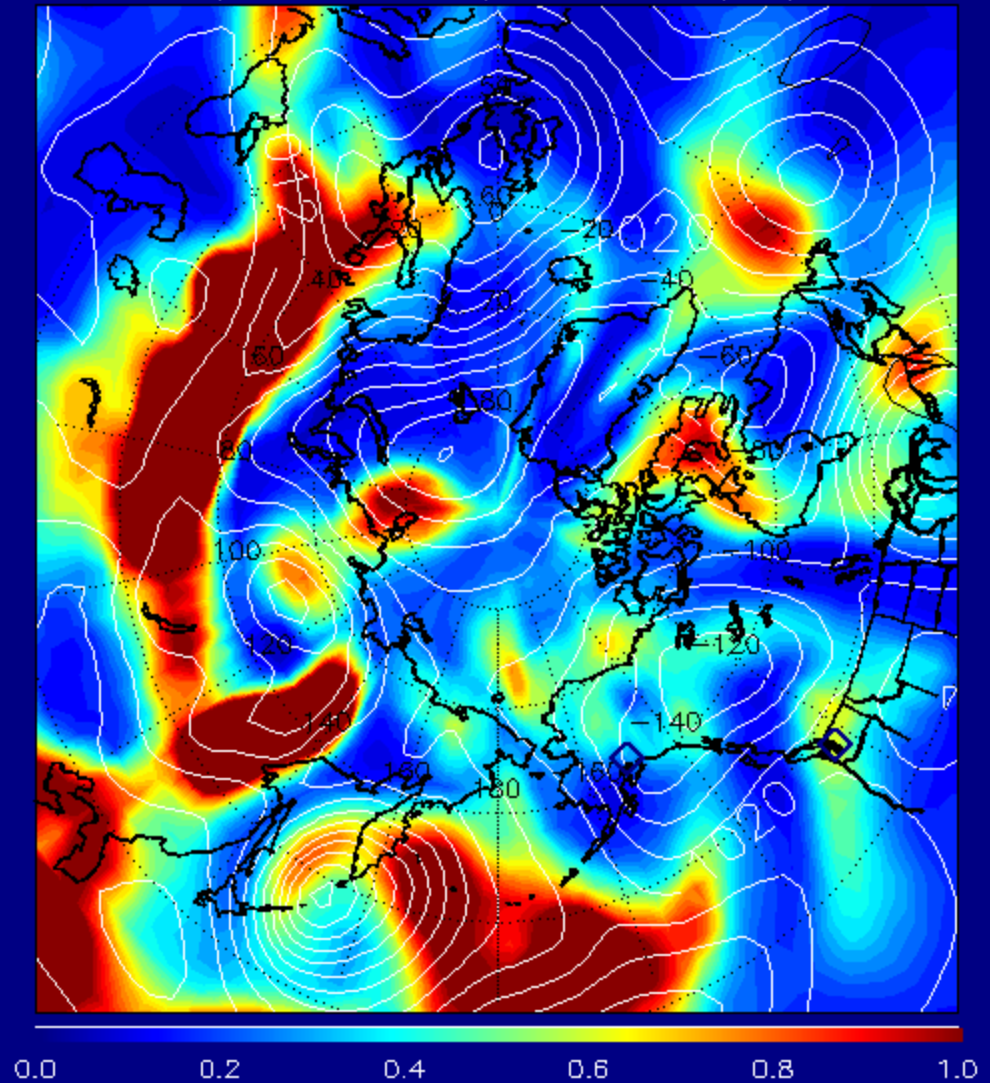


2008041300 Initial (Blue) and Final (Green) Lat/Lon  
(Barrow Parcels below 5km)



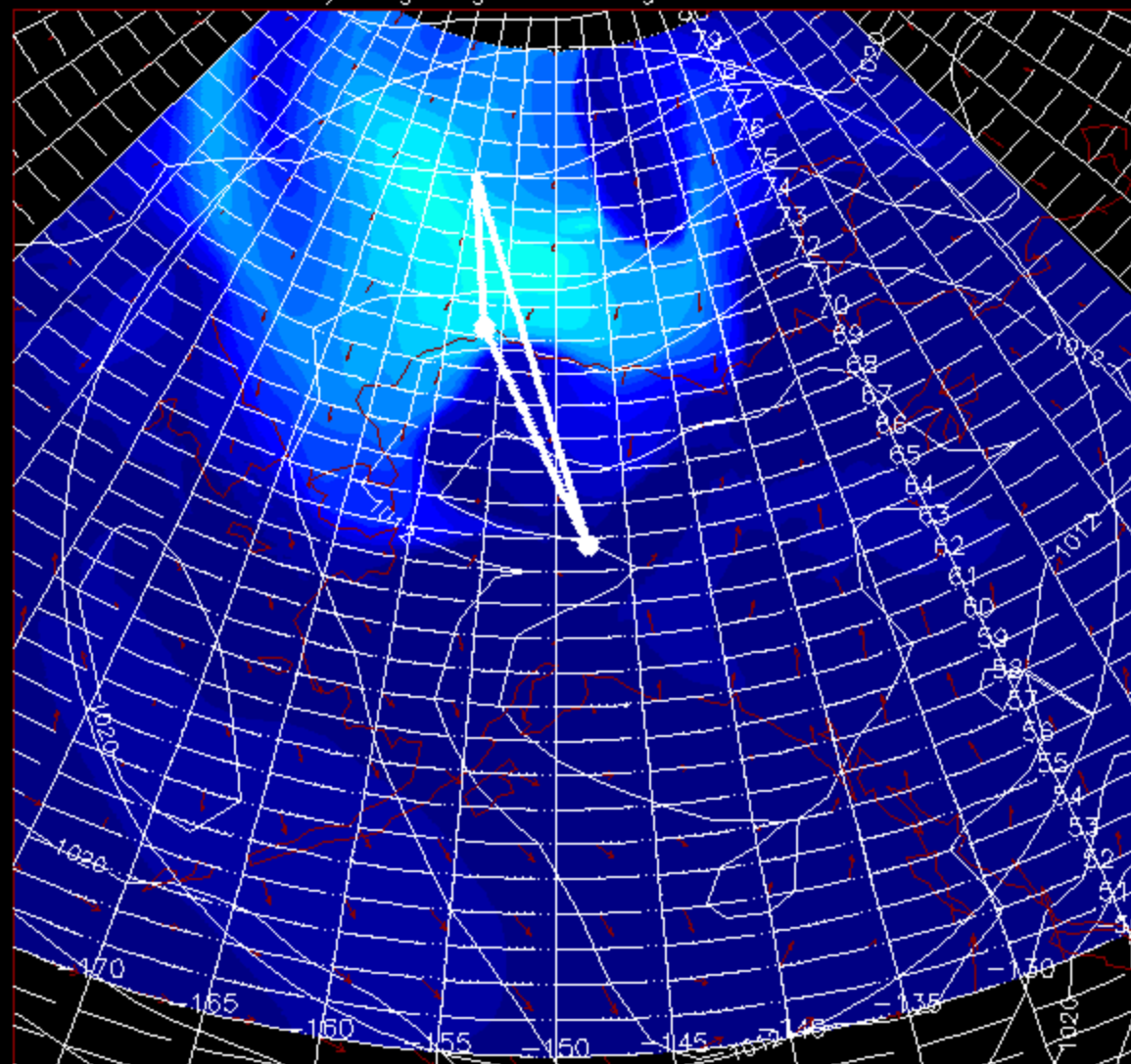
00Z 04/10 (Wed afternoon)

AOD Total Aerosol 00Z 20080413  
(MSL Pressure Contoured/95% Convective Precip=Red)

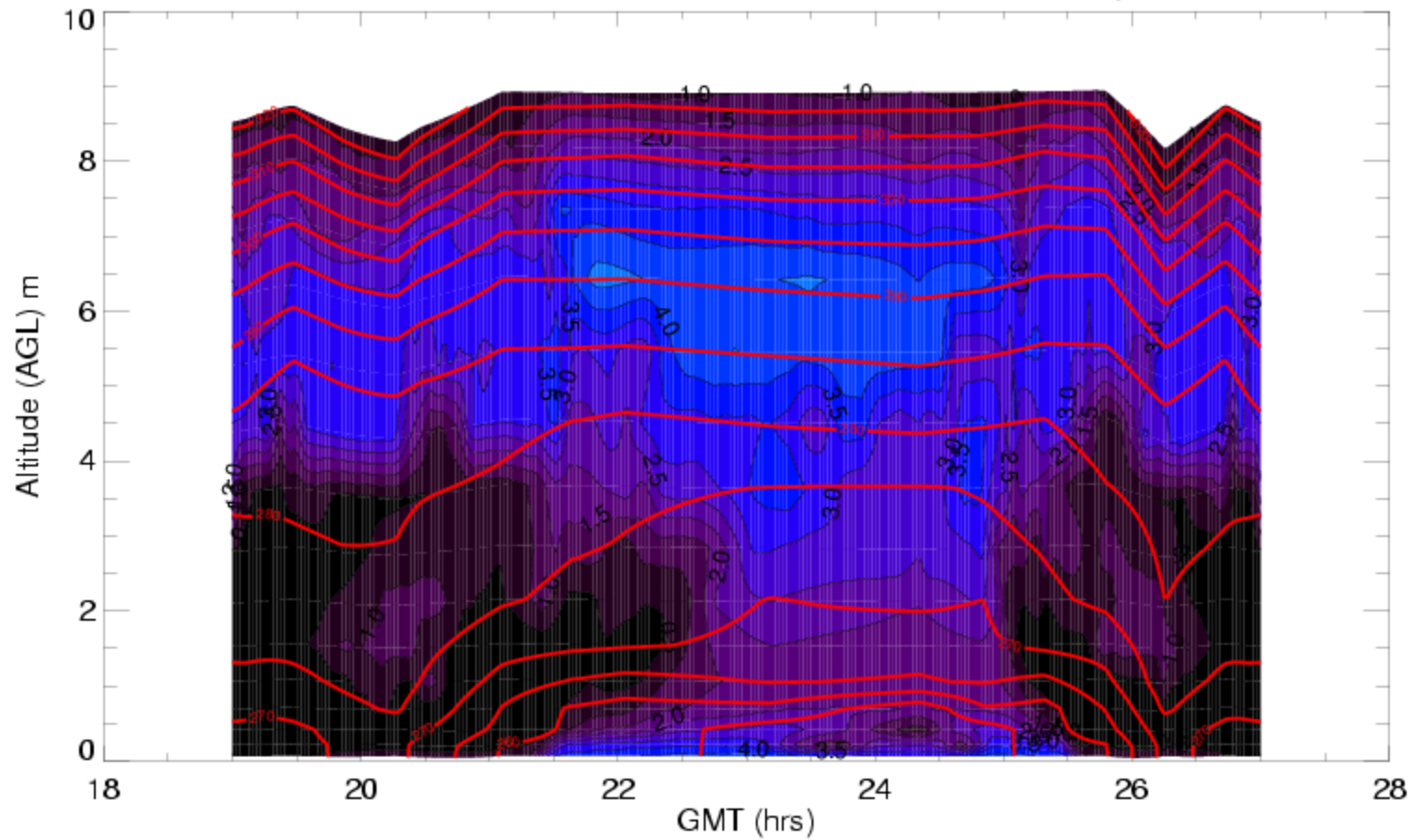


RAQMS<sub>G</sub> 24hr ASSIM + 108hr Fx Initialized 12Z 20080407

SFC 5-day Lagrangian Averaged BrO 2008041200

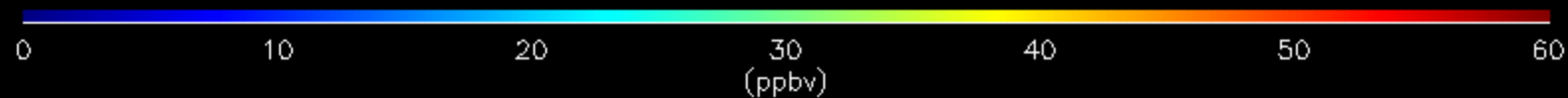
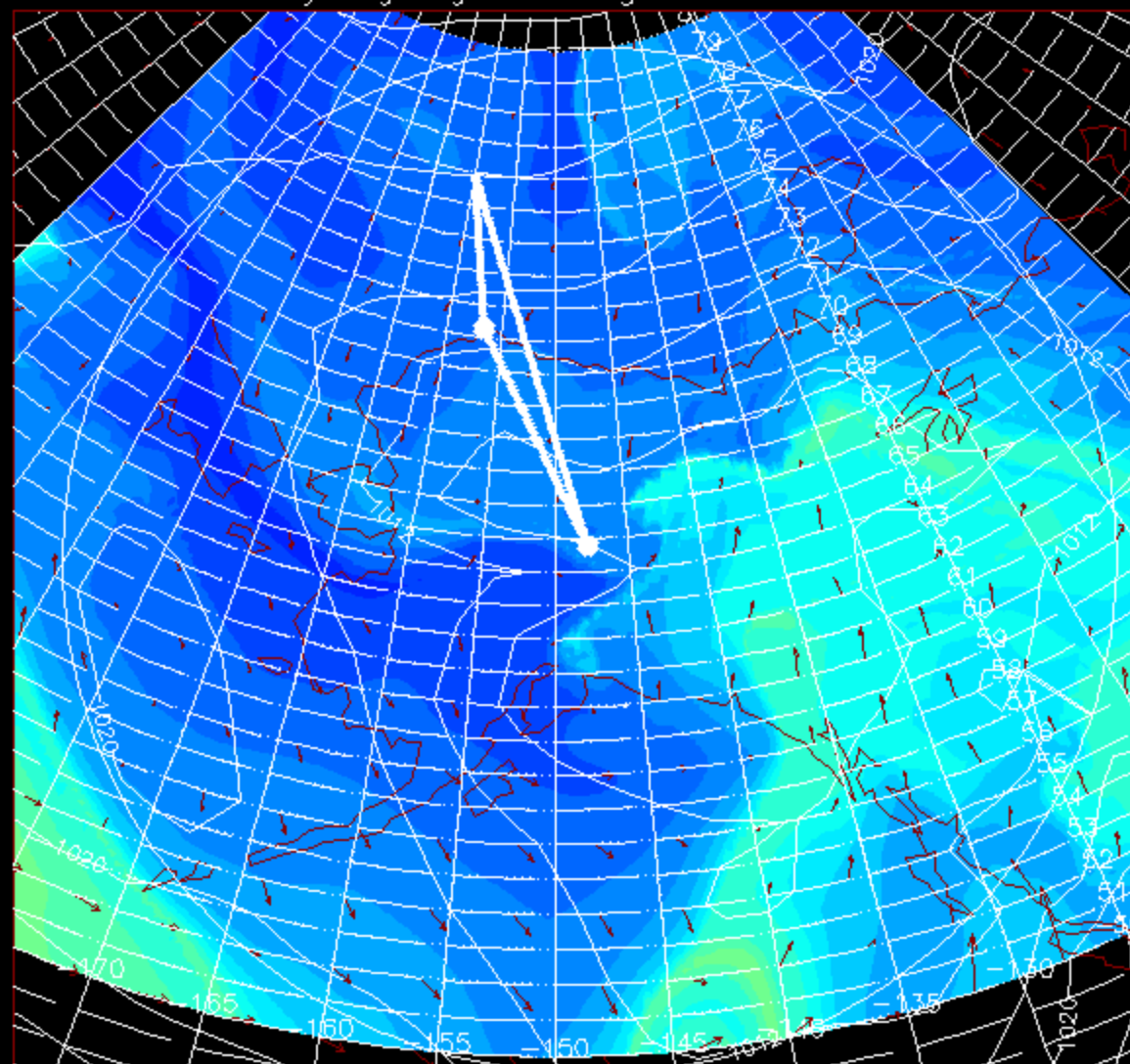


84hr FX ibro Cl= 0.500000 max= 4.70960  
RAQMS\_20080412\_00Z\_84hr\_fcst\_rdf\_curtain\_arcpac.dat

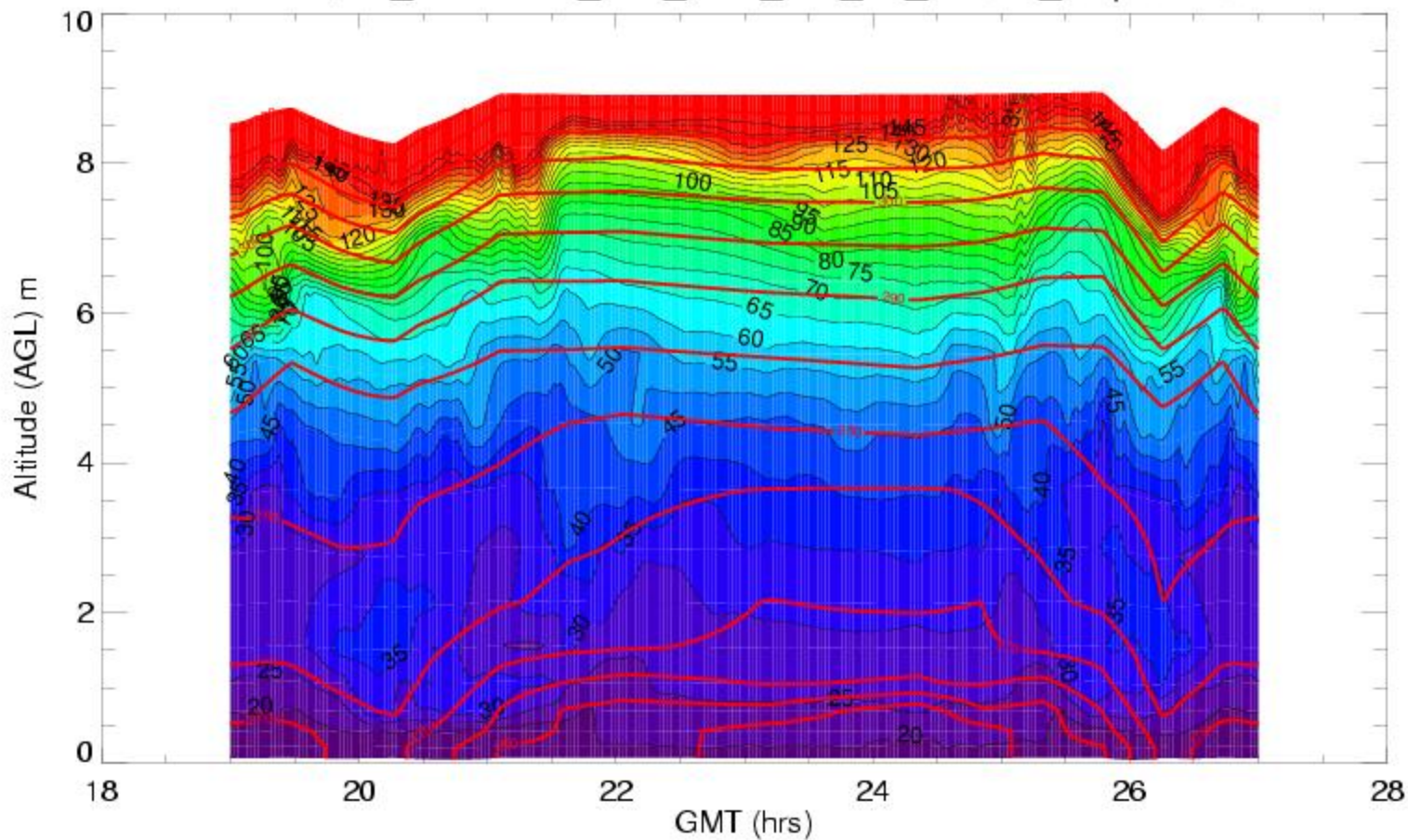




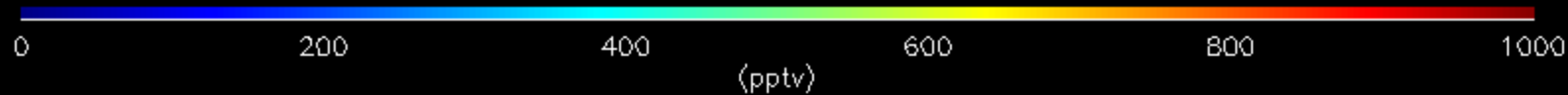
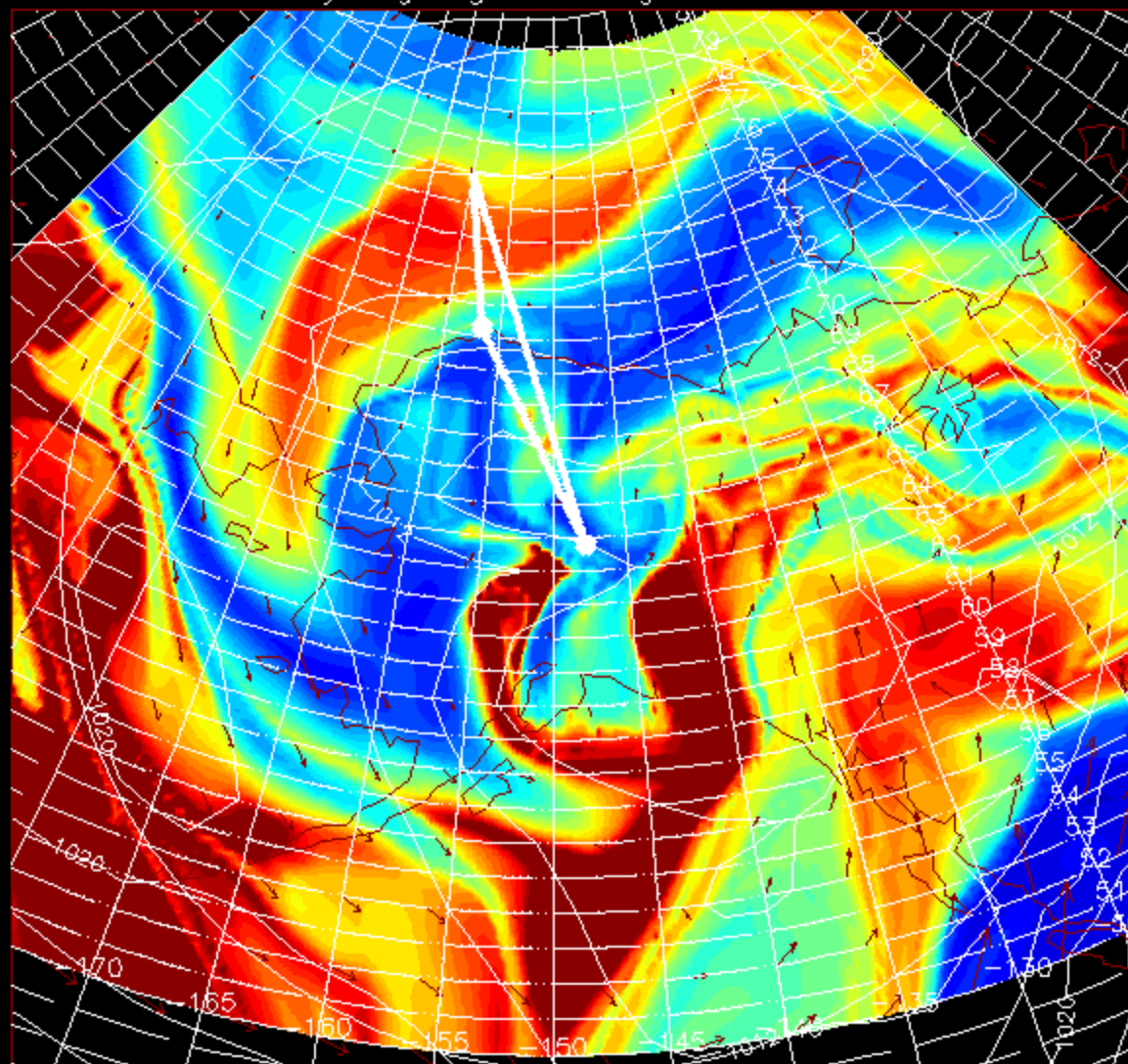
SFC 5-day Lagrangian Averaged Ozone 2008041200



84hr FX iox Cl= 5.00000 max= 265.691  
RAQMS\_20080412\_00Z\_84hr\_fcst\_rdf\_curtain\_arcpac.dat



1km 5-day Lagrangian Averaged S04 2008041200





84hr FX iso4 Cl= 34.0000 max= 1034.18  
RAQMS\_20080412\_00Z\_84hr\_fcst\_rdf\_curtain\_arcpac.dat

